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2.4.2 Maintenance of the ERV / RRV Equipment and Supplies

After an Emergency Response

ERT Coordinators shall:

- Replenish supplies.
- Contact select vendor to recharge equipment.
- Do whatever else is necessary to return the ERV / RRV to its normal state of readiness as soon as possible.

Routine Upkeep

ERT Coordinators shall:

- Use equipment lists (Attachments 2 and 3) at least once a month or after each incident, to inspect the ERV / RRV equipment.
- Replenish supplies from Oak Point's Storeroom and/or from outside sources.

2.5 Operation of Emergency Response Vehicle (ERV)

2.5.1 Side Compartments

There are four (4) compartment doors on each side of the box-body of the vehicle. Compartments on both sides of the box-body are numbered one (1) through four (4) from front to rear. The compartment numbers on the driver's side of the vehicle are prefixed with a "D". Passenger-side compartment numbers are prefixed with a "P". Two examples: (1) The rear compartment on the driver's side is numbered "D-4"; (2) the front compartment on the passenger's side is numbered "P-1".

2.5.2 Rear Compartments


Compartments on the rear wall of the box-body are prefixed with either a "T" or an "R" for "Top" and "Rear".

2.5.3 Electrical

Two (2), 12-volt storage batteries are located in the chrome-plated compartment that's located under the cab door on the passenger side, immediately behind the right-front wheel. The batteries are designated "A" and "B", or they are designated "1" and "2", depending on what control or indicator you happen to be looking at. Battery "A" = Battery "1"; Battery "B" = Battery "2".

To get to the batteries:

1. Pull up the small latch at the top of the battery compartment door. The door should pop loose but not open.
2. Then, turn the latch, either clockwise or counterclockwise, to completely release the hatch and open the door. Lower the door until it hangs free.
3. Locate the small red-handled latch on your right, just inside the forward wall of the battery compartment. When the latch is fastened, the red handle will be horizontal and pointing toward the centerline of the vehicle. Pull up the lever handle and move it 180 degrees. The handle should be horizontal again and now pointing out away from the centerline of the vehicle.

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4. Pull out the tray holding the batteries. The tray should roll out, providing access to the batteries.

2.5.4 Battery-Selector Switch

This switch controls electrical power from the batteries. It allows you to draw power from one battery or the other, or both. Possible selections for the battery-selector switch are: "OFF", "1", "2" and "BOTH". You will find the battery-selector switch at the foot of the transmission gear shift control. It's located on the forward end of the custom console that has been placed between the seats of the cab.

Engine Startup

Turn the battery-selector switch to "BOTH". Start the engine with the ignition switch, according to the instructions in the Chevrolet Owner's Manual. Leave the switch on "BOTH" while the engine is running. **Always turn the ignition switch off before turning off the battery-selector switch.** If you turn the battery-selector switch to "OFF" while the engine is still running, you could possibly damage the alternator. To repeat:

Always turn off the ignition switch before turning the battery-selector switch to "OFF"!

Battery Conditioner

The battery conditioner is located in Compartment "P-4". When the battery conditioner is connected to an external 120-volt A/C electrical power source, it provides a trickle charge to the storage batteries, thereby maintaining their electrical charge. When the Emergency Response Vehicle is not in use, the battery conditioner should be plugged in. To hook up an external power cord to the battery conditioner, push the plug of the power cord into the receptacle labeled "AUTO EJECT", which is located on the rear wall of the box-body.

Then later, before you start up the engine and drive off, you should unplug the power cord. But if you do happen to forget to unplug the power cord, the Auto Eject receptacle will automatically release the plug on its own.

Battery Charge Indicator


The charge indicator is located under the driver's seat, on the side closest to the door. You can get your best view of it by standing on the ground, outside the cab. The charge indicator has two lights, one for each battery, mounted near the top of a metal plate. The plate contains printed instructions for understanding the operation of the lights.

A/C Generator

In order to get 110-volt A/C to the electrical outlets on the walls of the box-body, you must engage the generator.

First, make sure the hand break is off (hand lever down in a vertical position). The hand break is located under the dashboard on the left side of the cab. With the engine idling, move the gear shift to Drive, "D".

To engage the generator, pull out the red power-takeoff (PTO) control knob, which is located on the left side of the steering column. You may need to let the truck roll a little

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while you pull out the PTO knob, to get the gear teeth to mesh with the generator. The red light on the left side of the PTO knob will light up when the power-takeoff engages.

After the red light comes on, move the gear shift lever to Neutral, "N" and apply the hand break by pulling the lever all the way up. Applying the hand break will engage the generator. The truck's engine idle speed will increase.

A speed governor will control the engine speed to ensure that the generator maintains an output of 110 AC volts. You can monitor the voltage output on the voltage meter in Compartment "P-4".

The control box for the speed governor system is mounted under the passenger seat in the cab.

When you're finished, release the hand break by pushing the lever down to the vertical position. Then, push in on the red PTO knob. The red light should go out.

Never attempt to drive the vehicle with the PTO engaged (red light on)!!

Circuit Breakers

The circuit breakers are located in Compartment "P-4". The circuit breaker box also houses the "MAIN" on/off switch, and A/C voltage meter.

2.5.5 Foam Unit

The foam unit is located in the forward compartment of the box-body. The compartment contains the 100-gallon foam tank, the operating controls, the water hookups, and the discharge connects and hoses.

Both Compartments "D-1" and "P-1" provide access to water hookups and discharge hoses, but only "D-1" provides access to the controls that operate the foam unit.

To load AFFF foam into the foam unit, you must climb on top of the box-body and load the fluid into the top of the 100-gallon tank.

Foam Unit - Compartment P-1


This passenger-side compartment provides access to an inlet hookup for water (labeled "Aux. Suction") and a discharge connection (labeled "Discharge #2") with 150 feet of 1-1/2" fire hose on ERV. All operating controls for the foam unit are located on the Driver's side of the vehicle in Compartment "D-1".

Foam Unit - Compartment D-1

Like the Compartment "P-1", this driver-side compartment also provides access to an inlet hookup for water (labeled "Suction") and a discharge connect (labeled "Discharge #1") and 150 feet of 1-1/2" fire hose on ERV. In both compartments, the 1-1/2" hoses are pre-connected to the discharge lines. In addition, "D-1" also contains the controls for operating the foam system.

Foam Meters, Valves and Gauges

Check the foam fluid meter to see how much AFFF foam is in the tank. The meter is located on the control panel in Compartment "D-1", above the "Suction" reach (pull) rods.

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The foam fluid meter needs electrical current to operate. Switch on the rocker-bar switches on the cab's control console, labeled "Master" and "Compt. Lights". Refer to Section 2.4.8, "Miscellaneous Lights", below.

Set the meter valves, which are located at the top of the control, on either side of the "foam flush handles". These meter valves, one for each discharge line, adjust the percentage of foam in the foam-water mixture. For alcohol fires, set the appropriate valve at "6" (6% foam); for all other fires or releases, set it at "3" (3% foam).

To change settings, do what the valve instructs: **"Push and Turn"**. Push in on the valve and turn it clockwise to cut down on the amount of foam you want to mix with the water. When the valve is all the way in, it is closed (0% foam in the foam-water mixture being discharged through the hose).

To open the valve, push and turn counterclockwise. The spring-loaded knob will push out from the control panel. Match up the groove in the knob with your choice of mixture; use only "3" or "6" (3 or 6 percent foam in the foam-water mixture). **For training, we will use 1% foam-water mixture.**

Check the pressure gauges. These gauges, one for each discharge line, are located above the "Discharge" rods, at the lower left of the control panel.

The foam system requires a pressure of at least 125 psi to produce foam.

Charging the Foam System with Water

First, let water into the system:

- Connect a 2-1/2" water hose to the chrome inlet pipe labeled "Suction" in Compartment "D-1", or the chrome inlet pipe labeled "Aux. Suction" in Compartment "P-1".
- Then, turn on the external water supply. When the water hose is filled with water, you are ready to let the water into the foam unit.

Pull out one of the two reach rods labeled "Suction" to let the water enter the system.


If you're supplying water to the foam unit through the inlet pipe labeled "Suction" in Compartment "D-1", pull out the reach rod labeled "Suction".

If you're supplying water through the inlet pipe labeled "Aux. Suction" in Compartment "P-1", pull out the reach rod labeled "Aux. Suction".

Now the foam unit is charged with water.

Water Discharge

First, get water flowing through the discharge line(s) you are going to use. Then pull out the appropriate discharge rod: "Discharge #1" for the discharge line in Compartment "D-1", and/or "Discharge #2" for the discharge line in Compartment "P-1". You can use either discharge line you choose. It doesn't matter whether water enters the foam unit through "D-1" or "P-1". Once you have pulled the appropriate "Suction" rod, the unit will be charged with water. Then it doesn't matter which discharge line you use.

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However to discharge from both discharge lines (Compartments "D-1" and "P-1") simultaneously, you must connect both suction lines ("Suction" and "Aux. Suction").

Foam Discharge

Make sure the meter valve is set. If not, refer to "Foam Meters, Valves and Gauges", above.

Once you have water flowing through your chosen discharge hose, pull out the appropriate reach rod: ("Foam Discharge #1") for the discharge hose in Compartment "D-1" or ("Foam Discharge #2") for the discharge hose in Compartment "P-1".

Now apply the foam discharge using the technique most applicable for the fire or vapor suppression in your emergency response.

To stop foam from being mixed with the water flowing from the discharge line, push the same reach rod back in.

Flushing the Foam Unit

After discharging a mixture of foam and water, make sure you flush out the discharge line and hose with water before shutting down the system.

To flush out the system, rotate the appropriate "Foam Flush" handle one-quarter turn counterclockwise: "No. 1 Foam Flush" for the discharge line in Compartment "D-1" and "No. 2 Foam Flush" for the discharge line in Compartment "P-1". These controls are located between the meter valves at the top of the control panel.

2.5.6 External Radio

The broadcasting controls for the external speakers are located in the cab compartment, on the control console between the seats.

You can broadcast your voice commands and other messages over the external speaker. You can also broadcast an assortment of mechanical and electronic noises: horn, siren, wail, yelp, and something that sounds like a "Star Trek" phaser.


1. Flip the master toggle switch to "On". This activates all the Audio controls.
2. Use the selector switch to choose which option you want. Your options are: "Radio", "Horn", "Manual", "Wail", "Yelp" and "Phaser".
3. The external Audio Broadcast is set at one volume: **LOUD!** Therefore, you should advise anyone standing in front of the truck to step aside. **Never broadcast in an enclosed area.**

Radio Option

Not Operable - Use stand alone base radio for plant communication.

Air Horn Option

Turn the selector switch to "Horn". Then push the center of the steering wheel. However, the air-system needs to build up pressure to about 60 psi in order for the air horn to work.

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Manual Option

Siren

With the selector switch pointing to "MAN", depress the red push-button. The external speaker will broadcast a siren sound for as long as you hold down the button. When you let the button up, the siren will stop.

Public Address

When you turn the selector switch pointing to "MAN", turn up the volume with the black "PA" control knob, which is located to the right of the red siren button. Then, bring the hand mike to your mouth, depress the push-button on the microphone and speak.

Wail, Yelp and Phaser Options

When you turn the selector switch to "WAIL", a loud wail sound will erupt from the external speaker and will continue for as long as the master toggle switch is on. In other words, with the selector switch on "WAIL", you can turn the wail sound on and off with the master toggle switch. "YELP" and "PHASER" work in the same manner.

2.5.7 Floodlights

Front Floodlights

Two 500-watt floodlights have been attached to the front wall of the box-body, one on each side of the cab. Each light is mounted on top of a telescoping pole with folding tripod legs. The entire floodlight assembly, light, pole and legs, can be detached from its brackets and set independently away from the vehicle.


You can leave these floodlights attached to the vehicle, or you can detach them and set them away from the truck. The power cord for each spot light can be plugged into one of the six 110-volt A/C outlets that are located on the exterior wall of the vehicle's box-body: two on the front wall, two on the rear wall and one on each side. These A/C electrical outlets are twist lock receptacles. To operate these outlets, push in the power cord plug and turn clockwise one-eighth turn. To unplug, twist the plug counterclockwise one-eighth turn and pull out.

To set up a floodlight independently, first detach the light pole leg assembly from the front wall of the box-body. Two fasteners hold the light assembly on the truck: (1) a latch located near the top of the tripod legs, and (2) a bracket at the bottom of the pole.

To detach the light pole from the top latch, pull out the black knob and pull the pole away from the wall of the box-body. Then, lift the assembly to disengage the bottom of the pole from the nubs on the bracket affixed to the box-body.

To deploy the tripod legs, turn the black knob at the top of the legs in a counterclockwise direction to loosen the mechanism that holds the legs against the telescoping pole. Pull out the tripod legs and secure them by retightening the same black knob.

To get power to the A/C outlets, see Section 2.4.4.4 "A/C Generator" above.

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Rear Floodlights

Two 12-volt Halogen floodlights, mounted on telescoping poles, are attached to the rear wall of the box-body. They can be used while still attached to the box-body, or you can detach them from their mountings and hold them in your hands. These light pole assemblies don't have legs.

These floodlights are powered by the storage batteries. Turn the battery-selector switch to either "1" or "2". Operate the light with the three-position toggle switch which is located on the spotlight. Toggle-switch positions are: "Off", "Flood" and "Spot".

2.5.8 Miscellaneous Lights

The rocker-bar switches for the flashing lights and compartment lights are located next to the external audio controls on the passenger's side of the control console. First, flip the "MASTER" Switch to activate all of the other rocker-bar switches.

Flashing Lights

A bar of red flashing lights are mounted on the roof of the cab. Use the two (2) rocker-bar switches, each labeled "LIGHTBAR", to turn these flashing lights on and off. One switch works the light on the right side of the bar and the other switch works the lights on the left.

Compartment Lights

One rocker-bar switch, labeled "COMPT. LIGHTS", turns lights on and off in all compartments of the box-body. This switch also provides electrical power to the foam fluid meter on the foam-unit control panel in Compartment "D-1".

2.6 Operation of the Rapid Response Vehicle

2.6.1 Side Compartments


There are two (2) compartment doors on the driver side and three (3) on the passenger side of the box-body of the vehicle. Compartments on both sides of the box-body are numbered one (1) two (2) and (3) from front to rear. The compartment numbers on the driver's side of the vehicle are prefixed with a "D". Passenger-side compartment numbers are prefixed with a "P". Two examples: (1) The rear compartment on the driver's side is numbered "D-2"; (2) the front compartment on the passenger's side is numbered "P-1".

2.6.2 Rear Compartments

Compartments on the rear wall of the box-body are prefixed with either an "L" or an "R" for "Left" and "Right".

2.6.3 Electrical

Two (2), 12-volt storage batteries are located under the hood. The batteries are designated "A" and "B", or they are designated "1" and "2", depending on what control or indicator you happen to be looking at. Battery "A" = Battery "1"; Battery "B" = Battery "2".

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2.6.4 Battery-Selector Switch

This switch controls electrical power from the batteries. It allows you to draw power from one battery or the other, or both. Possible selections for the battery-selector switch are: "OFF", "1", "2" and "BOTH". You will find the battery-selector switch on the driver side floorboard.

Engine Startup

Turn the battery-selector switch to "BOTH". Start the engine with the ignition switch. Leave the switch on "BOTH" while the engine is running. **Always turn the ignition switch off before turning off the battery-selector switch.** If you turn the battery-selector switch to "OFF" while the engine is still running, you could possibly damage the alternator.

Battery Conditioner

The battery conditioner is located on the driver's side exterior. When the battery conditioner is connected to an external 120-volt A/C electrical power source, it provides a trickle charge to the storage batteries, thereby maintaining their electrical charge. When the Rapid Response Vehicle is not in use, the battery conditioner should be plugged in. To hook up an external power cord to the battery conditioner, push the plug of the power cord into the receptacle labeled "AUTO EJECT", which is located on the Driver's side wall of the box-body.

Before you start up the engine and drive off, you should unplug the power cord. But if you do happen to forget to unplug the power cord, the Auto Eject receptacle will automatically release the plug on its own.

Battery Charge Indicator

The charge indicator is located on the Driver's side wall of the box-body. You can get your best view of it by standing on the ground, outside the cab. The charge indicator has two lights, one for each battery, mounted near the top of a metal plate. The plate contains printed instructions for understanding the operation of the lights.

2.6.5 Power Take Off (PTO)


In order to operate the fire water pump, you must engage the PTO.

First, make sure the hand break is off (hand lever down in a vertical position). The hand break is located on the floor board in the center of the cab. With the engine idling, move the gear shift to Drive, "D".

To engage the pump, pull out the red power-takeoff (PTO) control knob, which is located on the floor board of the cab. You will need to let the truck roll a little while you pull out the PTO knob, to get the gear teeth to mesh with the generator. The red light on the left side of the PTO knob will light up when the power-take off engages.

After the red light comes on, move the gear shift lever to Neutral, "N" and apply the hand break by pulling the lever all the way up. Applying the hand break will engage the PTO. The truck's engine idle speed will increase.

A speed governor on the driver side control panel will control the engine speed to ensure that the pump maintains a desired pressure. Also, a relief valve can manually be set to

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maintain pressure. This relief valve is especially important to monitor when multiple hose lines are used.

To disengage the pump, release the hand break by pushing the lever down to the vertical position. Then, push in on the red PTO knob. The red light should go out.

Never attempt to drive the vehicle with the PTO engaged (red light on)!!

2.6.6 Foam / Fire Hose System

The foam unit is located in the forward compartment of the box-body on the passenger side (P-1). The compartment contains six 5-gallon foam buckets, the eductors, and the 150' pre-connected 1 1/2" Foam Line.

For alcohol fires, set the eductor valve at "6" (6% foam); for all other fires or releases, set it at "3" (3% foam).

To change settings: **"Push and Turn"**. Push in on the valve and turn it clockwise to cut down on the amount of foam you want to mix with the water. When the valve is all the way in, it is closed (0% foam in the foam-water mixture being discharged through the hose).

To open the valve, push and turn counterclockwise. The spring-loaded knob will push out from the control panel. Match up the groove in the knob with your choice of mixture; use only "3" or "6" (3 or 6 percent foam in the foam-water mixture). **For training, we will use 1% foam-water mixture.**

The foam system requires a pressure of at least 125 psi to produce foam.

Charging the System with Water

First, let water into the system:

- Connect a 2-1/2" water hose to the chrome inlet pipe labeled "Suction" on the driver side control panel.
- Then, turn on the external water supply. When the water hose is filled with water, you are ready to let the water into the 350 gallon water storage tank, or to directly feed the pre-connected hoses. (Two 1 1/2", One 2 1/2" and the 1 1/2" Foam Line)


Pull out the reach rod labeled "Suction" to let the water enter the system.

There are labeled rod valves that will allow water to charge a selected pre-connected line, or to fill the 350 gallon water tank on the driver side control panel.

Flushing the Foam Unit

After discharging a mixture of foam and water, make sure you flush out the discharge line and hose with water before shutting down the system.

To flush out the system, rotate the appropriate "Foam Flush" handle one-quarter turn counterclockwise. These controls are located on the foam eductor.

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2.6.7 Light Systems

Front Floodlights

Two 500-watt floodlights have been attached to the front wall of the box-body, one on each side of the cab. Each light is mounted on top of a telescoping pole.

Rear Floodlights

Two 12-volt Halogen floodlights, mounted the rear wall of the box-body. These floodlights are powered by the storage batteries. Turn the battery-selector switch to either "1" or "2". Operate the light with the toggle switch which is located on the spotlight.

Miscellaneous Lights

The rocker-bar switches for the flashing lights and compartment lights are located in the cab on the control console. First, flip the "MASTER" Switch to activate all of the other rocker-bar switches.

Flashing Lights

A bar of red flashing lights are mounted on the roof of the cab. Use the two (2) rocker-bar switches, each labeled "LIGHTBAR", to turn these flashing lights on and off. One switch works the light on the right side of the bar and the other switch works the lights on the left.

3.0 Definitions


BSU&E -	Blending, Shipping, Utilities & Ecology work area
EH&S -	Environmental, Health & Safety Department
ERV -	Oak Point's Emergency Response Vehicle
IC -	Incident Commander of the ICS
ICS -	Oak Point's Incident Command System
Off-site -	Locations outside of the Oak Point Plant
On-site -	Locations within the Oak Point Plant
RRV -	Rapid Response Vehicle

4.0 References

Oak Point Emergency Response Vehicle Training Manual

5.0 Records

Obsolete copies of this procedure shall be archived in the OPDMS in accordance with Corporate retention guidelines. Requests for review copies of documents in Archive Status shall be made in accordance with PI-113.

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Record of Revisions and Reviews

Page	Revision	Date	Comments
1-9(2)	1.00	07/1993	Creation of the procedure
1-9(2)	1.01	12/1993	Miscellaneous revisions
1-9(2)	1.02	06/1995	Minor revisions
1-20(2)	1.03	07/1996	General revisions and addition of Section 4.4, "Emergency Response Vehicle Operation"
1-26(4)	1.04	01/1999	Revisions to entire document to reflect change from HAZMAT team to Emergency Response Team (ERT). Addition of Section 4.5 (RIV) and Attachments C & D.
1-16(4)	1.05	07/30/2004	Revised ERV Equipment List (Attachment 2); implemented new format; removed information on RIV; added information on RRV, added RRV Equipment List (Attachment 3), updated department personnel to reflect new organizational structure; and applied new format.

(#)= Number of attachment pages

6.0 Attachments
Attachment 1: ERV / RRV Description
Attachment 2: ERV Equipment and Supplies List
Attachment 3: RRV Equipment and Supplies List

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Attachment 1

Description of ERV

ERV COMPONENTS

- (1) Chevrolet chassis and cab.
- (2) Modular box-body of compartments for storing equipment, apparatuses, and supplies. The forward one-fifth of the box-body contains a foam-spreading unit for firefighting.

1991 Chevrolet C-6 "Chassis Cab"

- Capacity: 23,100 pounds gross vehicle weight
- Automatic transmission, four-speed
- Two-wheel drive
- Power steering
- Diesel engine, 6.6 liter
- Hydraulic split brake system
- Tow hooks

Options & Modifications

- Power take-off A/C generator – for six 110-volt external receptacles
- Cellular telephone
- Portable facsimile machine
- Four Floodlights: two 110-volt lights and two 12-volt lights
- On-Board Command Center
- Lights, Sirens, Internal/External Speakers
- Air horn
- Plant base radio with external speaker
- Portable Mutual Aid Radio
- Public address system
- Emergency Lights

Box-Body

- Foam spreading unit: 100-gallon foaming-agent tank, two 95-gpm discharge lines. Storage compartments for emergency response material.

Description of RRV

RRV COMPONENTS

- (1) International chassis and cab.
- (2) Modular box-body of compartments for storing equipment, apparatuses, and supplies. Fire pump and truck were paired and outfitted by E-One.

1991 International "Chassis Cab"


- Capacity: 12,500 pounds gross vehicle weight
- Automatic transmission, four-speed
- Two-wheel drive
- Power steering
- Diesel engine, 7.3 liter
- Hydraulic split brake system
- Tow hooks

Options & Modifications

- Power take-off (Hale 350 GPM Pump)
- Four Floodlights: two 110-volt lights and two 12-volt lights
- On-Board Command Center
- Lights, Sirens, Internal/External Speakers
- Air horn
- Emergency Lights

Box-Body


- 350 Gallon water storage tank.
- Storage compartments for emergency response material.
- Two pre-connected 1 ½" hose lines (150' each)
- One pre-connected 2 ½" hose line (200')
- One pre-connected 1 ½" foam line (150')
- 500' of 3" suction line
- Portable Extension Ladder
- 1" Booster Reel 150' (Automatic retraction)

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Attachment 2
Emergency Response Vehicle Equipment List

Compartment Codes: "D" Driver, "P" Passenger, "R" Rear, "T" Top							
TOP	D-1	P-1	R-1	BOTTOM	T-2		
	T-1				D-3	P-3	T-3
	D-2	P-2	R-2		D-3 (A&B)	P-3 (A&B)	
					D-4	P4	
D-1				P-1			
	Foam Inductor Control Unit				Aux Foam Inductor Unit		
	Tangus Fire Hoses (150')				Angus Fire Hose (150')		
D-2					Turbo Jet Nozzles, Foam Playpipes, Pistol Grip Nozzles		
	Hazardous Materials Response Kit				Gated "Y's", Spanner 7 Hydrant Wrenches		
	Hazardous Material Pipe Repair Kit				ICS Dry Erase Board		
	Hazmat Spill Control Coupling			P-2			
	Non-Sparking Tool / Standard Tool Kit				Burn Kit		
	Tin Snips, Cable Cutters, Bolt Cutter				First Responder Trauma Kit		
	(2) 100' Extension Cords				Medical Storage Kit		
	(2) 1' Electrical Pig Tails				Disposable Blankets / Pillows		
	Helicopter Landing Kit				(1) Skat Pak		
	Incident Command Vests				(2) Steward Oxygen Units		
	Pick Head Fire Axe				Backboards		
	Drum Transfer Pump / Grounding Cable				Sked Stretcher		
D-3					Ked Stretcher		
	Plug 'N Dike			P-3			
	Plugs & Wedges				Hazmat & Fire Response Boots		
	Pig Putty				(4) 2.2 SCBA's		
	Lead Wool / Tape Pack				Tingley Rubber Boots		
	Duck Tape / Danger Tape / Caution Tape			P-3 (A&B)			
	Non-Sparking Shovels				(2) Spare SCBA Air Cylinders (4.5)		
	Drum Roll			P-4			
	3-Gallon Spray Container (ERV Garage)				Circuit Breaker Housing		
	Decon Wash Down Powder (ERV Garage)				Kleen Guard Suits		
	Pipe Wrap				Green Bata Acid Suits		
	Trash Bags				Fire Response Gloves		
	Plastic Drop Cloth				Pig Putty		
	Decon Manifold Unit				Safety Glasses / Goggles		
	Folding Chairs				Hazmat Boot Covers		
	Scrub Brushes				Hazmat Boot Covers		
	Green Bata Acid Suits				Hazmat Glove Covers		
D-3 (A&B)					Powder / Duct Tape / Silicon Spray		
	(2) Spare SCBA Air Cylinders (4.5)				Water Cooler / Cups		
D-4					Batteries/ Paper Towels		
	(4) SCBA's w/Communication Device				Foam Fill Funnel		
	(Hazmat Use Only)				Aerosol Disinfectant / Lubricants		
					Wheel Chocks		

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Uncontrolled Document**Attachment 2 (Continued)****Emergency Response Vehicle Equipment List**

Compartment Codes: "D" Driver, "P" Passenger, "R" Rear, "T" Top							
TOP	D-1	P-1	R-1	BOTTOM	T-2	P-3	T-3
	T-1				D-3	P-3	
	D-2	P-2	R-2		D-3 (A&B)	P-3 (A&B)	
					D-4	P4	
R-1 (Top)				R-1 (Bottom) Continued			
Entry / Flash Suit				(5) Large		(6) Large	
Hazmat Level A Suits				Coat - 46		Coat - 46	
6 - Large				Pants (40 x 32)		Pants (40 x 32)	
1 Ex-Large				Gloves - L		Gloves - L	
R-1 (Bottom)				Boots - 11		Boots - 11	
Bunker Gear Storage Location				Suspenders		Suspenders	
(1) XX-Large		Suspenders					
Coat - 54		Coat - 54		(7) Large		(8) Large	
Pants (48 x 30)		Pants (48 x 30)		Coat - 46		Coat - 46	
Gloves - XL		Gloves - XL		Pants (40 x 32)		Pants (40 x 32)	
Boots - 13		Boots - 13		Gloves - L		Gloves - L	
Helmet		Helmet		Boots - 11		Boots - 11	
Suspenders		Suspenders		Helmet		Helmet	
				Suspenders		Suspenders	
(3) X-Large		(4) X-Large					
Coat - 50		Coat - 50		(9) Large		(10) Small	
Pants (44 x 32)		Pants (44 x 32)		Coat - 46		Coat - 38	
Gloves - XL		Gloves XL		Pants (40 x 32)		Pants (30 x 30)	
Boots - 12		Boots - 12		Gloves - L		Gloves - L	
Helmet		Helmet		Boots - 11		Boots - 10	
Suspenders		Suspenders		Helmet		Helmet	
				Suspenders		Suspenders	
T-1							
Stretcher Basket				Cab Compartment			
Backboard				PTO - Generator Control Handle			
Disposable Blankets				External Audio Control Panel			
Disposable Pillows				Base Radio w/External Speaker			
				Cellular Telephone w/Fax Capabilities			
T-2				High Powered Battery Charged Flash Lights			
300' - 2 ½ Fire Hose				Lights			
200' - 1 ½ Fire Hose				ERV Library			
Loading Unit for (AFFF) Foam				• Emergency Response Manual			
				• ERV Operating Instructions			
T-3				• ERV Guide Book			
Fiberglass Ext. Ladder				• Dry Erase Board w/Markers			
8' Pike Pole w/Cutting Hook				Binoculars			
T-4							
Stokes Basket							
8' Pike Pole w/Cutting Hook							

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Attachment 3

Rapid Response Vehicle Equipment List

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**Oak Point
Emergency Response Manual
On-Site Controls**

ERM-6.5
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<p>ORIGINATED</p> <p>SAFETY SPECIALIST</p> <p>S. J. STUNTZ</p>	<p>REVIEWED</p> <p>HEALTH & SAFETY SUPERVISOR</p> <p>G. A. CREEKMORE</p>	<p>AUTHORIZED</p> <p>AMERICAS REGION MANAGER</p> <p>M. H. BURNSIDE</p>
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ERM Reference Manual Distribution List

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OPDMS

All networked personal computers shall have access to the most current version of this Procedure in accordance with PI-111, "Control of Quality Assurance Related Documents and Procedures."



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1.0 Introduction/Scope

The purpose of this document is to cover the following topics:

- Site security and control of the Oak Point Plant under normal conditions
- Plant security under general emergency conditions

The information in this document applies to all personnel at the Oak Point Plant.

2.0 Procedures

2.1 Site Security and Control (General)

This document covers the responsibilities of the contract security forces at the Oak Point Plant under the following conditions:

- Non-emergency
- General emergency
- Bomb threat
- Storm threat

2.1.1 Overview of Plant Security Under Normal Conditions

Oak Point Plant Security protects property, personnel, facilities, and material against unauthorized entry, trespassing, sabotage, or other illegal or criminal acts.

The Security Officers will patrol fence lines, guard gates, watch over installations, manage parking lots, and answer incoming telephone calls during off-hours and weekends. They also are responsible for maintaining security at the off-site locations, and the Pan Am Building.

The Americas Region Manager has the last word over who can and who cannot enter the Oak Point Plant. Outside of normal business hours his authority is passed to the BSU&E Shift Supervisor or to the Manager-on-Call.


The manufacturing facilities of the Oak Point Plant are enclosed by a chain-link fence, topped with three strands of barbed wire. The northern and southern perimeter fence lines continue beyond the facility enclosure and extend to the bank of the Mississippi River, thereby barring unauthorized land access to the wharf and to the adjacent levee and batture.

Security Officers check employees and vehicular traffic entering and leaving the Plant. They limit entry to those individuals who have been authorized to conduct business.

Employees and contractors are issued magnetic photo ID Badges in order to enter and exit gates 1, 3, Gate C and the administration building. Temporary magnetic badges (non-photo) are issued to visitors at Gates 1 and 3 and the administration building. Visitors are required to return these badges upon departure. Both employees and contractors must wear their badges while on plant property.

2.1.2 Scheduled Work Hours

- Manufacturing hours: 24 hours a day, seven days a week.
- Normal business hours: 7:00 a.m. to 4:30 p.m., Monday through Friday, except for recognized holidays.

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2.1.3 Entrance Gates

Gate No. 1

Chevron employees and contractor office personnel normally use Gate No. 1 to go in and out of the Plant when they park their vehicles in the North Parking Lot.

Gate No. 1A

Deliveries to Oak Point use this gate. The Security Officer at Gate No. 3 guardhouse is responsible for monitoring this gate and allows appropriate ingress and egress.

Gate No. 2

- Weekdays:
 - Manned Monday through Friday from 5:00 AM to 7:00 PM excluding Holidays.
- Weekends:
 - Closed on weekends

Gate No. 3

The front two rows of parking, the parking spots along the North and West fence lines are for Chevron Oronite Employees. The remaining spots are used for contractors and visitors.

Gate No. 4

Gate No. 4 is locked and unmanned.

Gate No. C

Contract Construction personnel will use this gate for entrance.


- Open weekdays 6:00 a.m. to 6:00 p.m.
- Closed weekends and holidays.

2.2 Plant Security under Emergency Conditions

2.2.1 General

When the emergency alarm sounds, the gate Security Officers will close and lock all entrance gates. They will control pedestrian and vehicular traffic moving in or out of the Plant. No one may enter or leave the Plant without the approval of the ICS Staging Officer, Incident Commander, or a department manager. The Security Officers will keep the driveways and gateways clear of obstructions by diverting all non-emergency vehicles to parking areas. If railroad cars are being switched at the time of an emergency, Security personnel should stop the switching operations and have the locomotive engineer move the cars to a safe location. All vehicles that are not parked off the roadways should be sent to Gate No. 3, and from there, south to the contractor's yard. The Security Officers will continue guarding their gates and monitoring radios until they hear the all-clear signal.

The ICS Staging Officer will radio the gate Security Officers and tell them exactly who may and who may not enter the Plant during the course of the emergency. (The Staging Officer will set up and manage the satellite staging area within the Plant. Outside-agency

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personnel and equipment must enter the Plant to get to the staging area, where they will be kept on standby until the IC decides how to deploy them.)

Gate No. 1 and Gate No. 1A

Pedestrians use Gate No. 1; vehicles use Gate No. 1A.

When the emergency alarm sounds, the Security Officer will:

- Lock the guard facility.
- Close and lock both gates.
- Keep the driveway and gates free of obstructions.
- Prevent anyone from entering or exiting, unless specifically told otherwise by a Security Supervisor or an ICS Officer.
- Stand guard and monitor radio communications until the all-clear signal sounds.

Gate No. 2

The Security Officer will:


- Lock the guard facility.
- Lock Gate No. 2.
- Open the gate to A Street at the north end of the parking lot.
- Open the gate to Sixth Street at the south end of the parking lot.
- Keep the driveway and gates free of obstructions.
- Prevent anyone from entering or exiting, unless specifically told otherwise by a Security Supervisor or an ICS Officer.
- Stand guard and monitor radio communications until the all-clear signal sounds.

The Security Officer opens the gate to A Street and Sixth Street to create a north-to-south thoroughfare via streets A and B.

2.2.4 Gate No. 3

The Security Officer will:

- Lock Gate No. 3.
- Open the gate to B Street.
- Maintain order among people gathering at Gate No. 3 for head counts. (Gate No. 3 is an emergency gathering station.)
- Keep the driveway and gates free of obstructions: vehicles, people, etc.

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- Prevent anyone from entering or exiting, unless specifically told otherwise by a Security Supervisor or an ICS Officer.
- Stand guard and monitor radio communications. If contractor personnel are evacuated to this gate, the gate Security Officer will keep them orderly and *not* let them block the roadway or otherwise hinder the movement of emergency vehicles.

2.2.5 Gate No. 4

No planned procedures. This gate is locked and unmanned.

2.2.6 Gate No. 5

The Security Officer will:

- Lock the guard facility.
- Close and lock inside gate across 12th street.
- Close and lock the gate to Highway 23 and stand by the gate.
- Prevent anyone from entering or exiting, unless specifically told otherwise by a Security Supervisor or an ICS Officer.

2.2.7 Gate No. C

The Security Officer will:

- Lock the guard facility
- Close and lock the gate to Highway 23 and stand by the gate.
- Prevent anyone from entering or exiting, unless specifically told otherwise by a Security Supervisor or an ICS Officer.
- Stand guard at the gate and monitor radio communications until the all-clear signal sounds.

2.3 Bomb Incidents


2.3.1 Preparations

In order to cope with bomb incidents, Oak Point has developed two separate, *interdependent plans: a bomb incident plan and a physical security plan.*

2.3.2 Bomb Incident Plan

All communication radios shall be turned off, including those used by outside responders. Radio transmissions can detonate certain bombs. Security personnel will have to communicate by other means (e.g., by telephone or by runner).

All areas must be checked for unfamiliar objects (e.g., handbags, lunch pails, attaché cases, boxes, packages, and especially recycle bins and waste cans).

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Bombs can look like almost anything, and they can be placed or delivered in many ways. The bomb will probably not look like what most people think a bomb is supposed to look like. The search should aim to locate suspicious objects, packages, items, etc. Once something of this sort has been located, the Bomb Disposal Team from Plaquemines Parish will take charge.

REFER to Document ERM-6.11 ("Handling Bomb Threats") for information about Oak Point's bomb incident plan.

2.3.3 Physical Security Plan


Plant Security personnel provide the main line of defense against bomb incidents. Security personnel control access to the Plant and to specific critical areas within the Plant.

Security personnel should:

- Be on the look out for suspicious packages and materials being taken into critical areas of the Plant.
- Make sure that only authorized vehicles are allowed into the Plant.
- Take notice of people acting suspiciously; encourage Plant personnel, especially Maintenance personnel, to do the same.
- Take notice of objects, items, or parcels that look out of place or suspicious; encourage Plant personnel, especially Maintenance personnel, to do the same.
- Establish surveillance procedures that include potential hiding places (e.g., stairwells, rest rooms, and any vacant office space) for unwanted individuals.
- Report poor housekeeping. Trash can easily conceal a bomb.

When a suspicious object has been located, Plant Security personnel should do the following:

- Report the location of the suspicious object, along with an accurate description, to the IC or the person in charge.
- Prevent anyone from moving, jarring, or touching a suspicious object or anything attached to it. Only the Bomb Disposal Team will be allowed to remove or dispose of the bomb.
- Keep unauthorized people at least 300 feet away from the suspicious object - including the floors above and below - until the device has been removed/disarmed, and the building declared safe for re-entry.
- Make sure that the doors and windows of the surrounding building or structure are open. This precaution will minimize (a) primary damage from the blast and (b) secondary damage from fragmentation.
- Refer to Document ERM-6.11 ("Handling Bomb Threats").
- Assist with evacuation as directed by the IC or the person in charge.

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2.4 Plant Security during Storm Threats

When the Oak Point Plant has been put on Storm Watch Status, the Human Resources Department and Security will implement plans for site control during and after the storm. They will inform the IC and send a skeleton-crew list of Security personnel to the Storm Defense Coordinator.

Also during Storm Watch Status, one security guard should be stationed at the wharf to keep track of any vessels that might tie up.

2.5 Safe Distances, Refuge, & Evacuation

Refer to ERM 6.2 Section 2.2.3 for Safe Distances, Refuge and Evacuation.

3.0 Definitions

BSU&E =	Blending, Shipping, Utilities & Ecology
ERM =	Oak Point Emergency Response Manual
IC =	Incident Commander of the ICS
ICS =	Oak Point Incident Command System
PI =	Oak Point Plant Instructions

4.0 References

None.

5.0 Records

Obsolete copies of this procedure shall be archived in the OPDMS in accordance with Corporate retention guidelines. Requests for review copies of documents in Archive Status shall be made in accordance with PI-113.

Record of Revisions and Reviews

Page	Revision	Date	Comments
1-5(0)	1.00	12/1993	Creation of the procedure
1-5(0)	1.01	06/1995	Minor formatting change
1-11(0)	1.02	01/1999	Complete rewrite of procedure Section 4.0
1-7(0)	1.03	07/30/2004	Review of ERM, update of department personnel to reflect new organizational structure, update of signature page and application of new format.

(#) = Number of attachment pages

6.0 Attachments

None.

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SAFETY SPECIALIST	HEALTH & SAFETY SUPERVISOR	AMERICAS REGION MANAGER
S. J. STUNTZ	G. A. CREEKMORE	M. H. BURNSIDE

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1.0 Introduction/Scope

This document covers Chevron Oronite Company LLC's guidelines and procedures for responding to off-site emergencies.

Off-site emergencies have the following characteristics:

- They begin with either on- or off-site incidents.
- They have the potential to pose risks to the health, safety, and property of off-site locations.

This manual covers off-site emergency responses by Oak Point personnel and equipment. Oak Point off-site responses may include the following:

- Sending people and equipment off-site for local, sanctioned responses. Refer to Section 2.3.4 ("Local, Sanctioned Responses").
- Providing information and guidance over the phone.
- Providing other assistance, such as:
 - Making phone calls to outside agencies and others, as requested.
 - Calling third-party contractors or CHEMTREC for assistance, as requested.
 - Assisting the local community with post-emergency recovery needs.

NOTE: For ORONITE off-site incidents not directly involving Oak Point (i.e., Kell Chemical, Richmond, Omaezaki, etc.), go directly to Attachment 1.

2.0 Off-Site Emergency Procedure

2.1 General Guidelines and Information

2.1.1 Primary Function of the Emergency Response Vehicle (ERV) and the Rapid Response Vehicle (RRV)

Oak Point Plant uses the ERV and RRV primarily for on-site emergency responses.


However, Oak Point may also send the ERV and/or RRV off-site for various reasons – off-site emergencies, for example. Refer to Section 2.3.4 for information about local, sanctioned responses.

All of the equipment and supplies may be left on the ERV and/or RRV when it leaves the Plant. Oak Point has stored extra key equipment and supplies on shelves in the ERV shed. If the Plant has an emergency while the ERV and/or RRV is off-site, another vehicle can transport the equipment and supplies to the scene.

2.1.2 Notifications

Law Enforcement and/or Local Communities

These notifications usually correspond with Category Two or Category Three on-site emergencies where the local highway or community could be impacted. Refer to Document ERM-6.1, Incident Command System, Section 1.2, Categories of Emergencies and Levels of Response for information on emergency categories.

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Steps for notification:

1. The IC decides that local police, residents, and/or businesses should be notified.
2. The IC instructs the ICS Staging Officer to see that the notification takes place.
3. The ICS Staging Officer informs the Plaquemines Parish Sheriff's Office.
4. The Sheriff's Office takes care of all further notifications of the local community.

When notifying the Sheriff's Office, give the following information:

- Your name
- Name of our company (Chevron Oronite Co. LLC, Oak Point Plant)
- Nature of incident (i.e., what, where, and when)
- Wind direction
- Expected impact on community (Refer to Sections 2.2.1 and 2.2.2 of this document.)

ChevronTexaco Public Affairs

The IC will normally direct the ICS Staging Officer to notify ChevronTexaco Public Affairs about any incidents that involve:

- A Category Two or Category Three on-site emergency that could impact the local highway or community.
- A response by Oak Point personnel, vehicles, equipment, or supplies outside the Plant.
- Raw materials en route to Oak Point Plant in the local New Orleans areas, including Plaquemines Parish.
- ChevronTexaco products to or from the Oak Point Plant.

CONTACTS:

1. Brent Wood: Public Affairs Manager

- Work: (504) 592-6371
- Home: (504) 738-7174
- Beeper: 1-800-830-2438

An Operator will come on the line. At that time give your name and message.


R

- { 2. Matthew Carmichael: Public Affairs Representative

- Work: (504) 592-6432
- Home: (504) 281-4781
- Cell: (504) 908-6432 }

2.1.3 Local Populations

About 6,000 people live within a two mile radius of the Oak Point Plant. Most of these people live on the west bank of the Mississippi River. A map showing the location of individual buildings and residential houses is stored in the ERV and in the main EOC, which is located in the small conference room on the first floor of the Main Office Building.

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Important concentrations of people:

- Naval Air Station (Alvin Calender Field) is located less than a mile northwest of Oak Point Plant. At least 1,000 people are on the base at all times. This number can swell to 7,000 on drill weekends. During the October air show, the number of people at the Naval Air Station can greatly exceed 7,000.
- A day-care center and primary grade school on the base have children and adults from 6:30 a.m. to 5:30 p.m., Monday through Friday. It is located about ¼ of a mile northwest of the Oak Point Plant.
- Our Lady of Perpetual Help (church and grammar school), on Belle Chasse Highway, is about 2 miles north of the Oak Point Plant.
- Belle Chasse High School, on Belle Chasse Highway, is about 3½ miles north of the Oak Point Plant.
- Closest Residential Houses:
 - One-quarter mile northwest of Plant property, at the intersection of Langridge Drive and Belle Chasse Highway
 - Southwest corner of Oak Point Plant
 - Directly across the Mississippi River from the Oak Point Plant (about ½ mile distance)

2.2 On-Site Incidents with Off-Site Affects

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The IC should notify the { Manager-on-Call } in a timely manner as soon as it becomes apparent that an on-site incident will pose a significant threat to areas located outside of the Oak Point Plant.

The IC should decide whether or not Oak Point personnel and equipment will respond to the off-site incident, which could include helping local communities with their recovery needs.

The IC should notify ChevronTexaco Public Affairs as outlined in Section 2.1.2. The Manager on-call will jointly decide with the IC whether or not the EOC should be mobilized. Refer to ERM 6.1, Section 2.2, Emergency Operations Center for details of EOC formation.


2.2.1 Hazard Assessment

An on-site incident can affect off-site locations. The most likely scenarios to have off-site impacts are:

1. A large unintentional release of H₂S, SO₂, MMA or phenol at the Oak Point Plant with the resulting gas or vapor clouds migrating off-site.
2. Heavy smoke from a large fire migrating off-site or visible off-site.

These scenarios could be the result of a Category Two or Three emergency at the Oak Point Plant.

To determine the impact of a release that may have off-site impacts, refer to the three-ring binder entitled "Community Response Guidelines". For each chemical with potential off-site impacts, a separate laminated page describes on the front the difference in areas

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impacted depending on whether the release is large or small and if the wind is calm or breezy. On the back is a map where the impacted area can be determined based on the prevailing wind direction.

Refer to Attachment 2 for information about hazardous chemicals stored at the Oak Point Plant.

2.3 Off-Site Spills and Releases

2.3.1 Notification to the Oak Point Plant (General)

In all probability, we will hear about an off-site spill or release via telephone call from one of the following:

- CHEMTREC
- Transportation company
- Law enforcement agency
- Concerned citizen
- Chevron HELPLINE

2.3.2 Notification Received During Normal Business Hours

Switchboard Operator

During normal business hours, the switchboard operator will normally receive the incoming phone call. The switchboard operator will transfer the call to one of the following people (in order of preferential selection):


- R {
1. BSU&E Shift Supervisor (the main on- and off-hour contact)
 2. Environmental Group }

Person Notified

The person identified in Section 2.3.2 that receives notification of the incident should immediately call the ChevronTexaco Emergency Information Center (CTEIC) at 1-800-231-0623 (See Section 2.3.4).

For local, sanctioned (see Section 2.3.4) transportation incidents that Oak Point handles or is requested to handle, refer to and use the "Summary for Handling Chevron Oronite Co. LLC's Off-Site Emergencies" (including the Off-Site Emergency Response Checklist in Attachment 1). Then he or she will:

- Write down details.
- Make phone calls.
- Inform/discuss with the Section Supervisor. Do NOT respond with the ERV and or RRV, material, or personnel unless conditions in Section 2.3.4, Deciding How to Respond are met.

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2.3.3 Notification Received Outside of Normal Business Hours

Gate 3 Security Guard

The Security Guard at Gate 3 will answer incoming phone calls outside of normal business hours. He or she will then carry out the following steps:

1. Contact the BSU&E Shift Supervisor by radio.
2. Transfer the phone call to the BSU&E Shift Supervisor.

BSU&E Shift Supervisor

Refer to Section 2.3.2, Person Notified for details in handling the call.

2.3.4 Deciding How to Respond

The IC (normally the BSU&E Shift Supervisor) will immediately call the ChevronTexaco Emergency Information Center (CTEIC) at 1-800-231-0623. CTEIC will activate the Chevron Oronite Company Transportation Crisis Management Team (TCMT). The TCMT will arrange for all forms to be filled out. The IC shall inform the Manager-On-Call.

If the IC approves a local, sanctioned off-site response, ChevronTexaco Public Affairs should be notified immediately to handle the news media and other notifications. (Refer to Section 2.1.2, Notifications.). The IC should also notify CTEIC as soon possible about the details of the off-site response.

There are three basic response options available:

- Local, sanctioned responses
- More complex/distant responses
- No requested assistance from Oak Point. The TCMT will handle completely.

Local, Sanctioned Responses


Purpose

The purpose of a local, sanctioned response is to serve our local community, especially near the Plant.

Scope

Local, sanctioned, off-site responses are located close enough to the Oak Point Plant to allow Oak Point personnel and equipment to depart and return on the same day. These responses include:

- Spills of finished Oronite products, shipped from the Oak Point Plant.
- Spills of ChevronTexaco products en route to the Oak Point Plant.
- Inbound toll processed material. (These are owned by ChevronTexaco.)
- Mutual Aid responses.

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- Public Relations outings (includes parades, show-and-tell demonstrations, fairs, and other similar events).
- "Local" community disasters: These off-site responses deal with the recovery needs of local communities after incidents such as a jet crash, tornado, hurricane, etc.
- Other incidents as directed by the Section Supervisor or Manager-On-Call.

NOTE: In case of inbound raw materials or purchased products, it is the Carrier/Shipper's responsibility under the Distribution Code of Responsible Care® and applicable laws to handle any transportation incident (spill, etc.).

Only in the following conditions should the Oak Point Plant get involved:

- Occurs locally
- Involves immediate danger to people
- Occurs when Carrier/Shipper not responding with mitigation and cleanup efforts promptly (Response by the Oak Point Plant will be done only at the request of the Plaquemines Parish Sheriff's Office or the State Police.)

WASTES BELONGING TO THE CARRIER/SHIPPER WILL BE HANDLED BY OTHERS. SPECIFICALLY, CHEVRONTExACO WILL NOT ACCEPT OR TRANSPORT WASTES FOR CARRIER/SHIPPERS.


Guidelines for Off-Site Responses Including the ERV and/or RRV Use

The IC (usually the BSU&E Shift Supervisor) can authorize off-site responses by Oak Point personnel and the ERV/RRV. Off-site responses must also meet either of the following criteria:

- They must be local, sanctioned responses. (Refer to Section 2.3.4, Local, Sanctioned Responses.)
- A senior emergency official (such as a Sheriff or the State Police) at the emergency scene must request the response.

The BSU&E Shift Supervisor shall:

1. Notify the Section Supervisor of his or her actions in a timely manner and of his or her unavailability to serve as IC in the event of an emergency at the Oak Point Plant. Prior to leaving the Plant, make sure that at least one other supervisor is made aware of the situation.
2. Limit the use of the ERV/RRV and the activities of its crew to helping an on-going, in-place emergency response effort. For example, by providing:
 - Information about the raw materials and products involved in the incident.
 - Use of the ERV/RRV, crew, equipment, and supplies.
 - Other help as requested by the person in charge of the off-site emergency response.

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3. Make the necessary on-scene decisions – within original approval guidelines – that affect Oak Point personnel and property, including the ERV/RRV and its equipment and supplies.
4. Avoid primary responsibility for an off-site emergency response. Avoid becoming IC of the off-site emergency scene – unless it is the only option available (i.e., no outside emergency official or emergency response effort in place). Assume command of an off-site emergency response only with the approval of the Section Supervisor.

ERV/RRV Details

CREW

The ERV/RRV crew shall consist of two people:

- BSU&E Shift Supervisor
- One ERT Member, who shall:
 - Drive and operate the ERV/RRV.
 - Help locate supplies on the ERV/RRV.
 - Possess a valid Louisiana Class D drivers license.

ERV/RRV DRIVER TRAINING

Driver Training


The Oak Point Plant will select and train drivers from the ranks of the ERT members, and it will fill vacant driver slots as they open.

Additional Oak Point Personnel, Equipment and Supplies

Any additional equipment and personnel that are needed must be transported to the off-site scene in another vehicle. The ERV/RRV has only two seats for people and no extra room for additional equipment and supplies. The Oak Point Plant has pickups, a van, and a flatbed truck that can be used to transport additional personnel, equipment, and supplies to off-site locations.

The BSU&E Shift Supervisor can get additional equipment from local third-party contract companies. Oak Point has contacts with these local contractors:

- For bulldozers, backhoes, etc.: M&B Industrial Maintenance, 889-0648 (24-hour phone number).
- For skimmers, absorbents, cleanup services: U.S. Environmental, (504) 279-9930.
- If necessary, refer to Document ERM-0.2, Emergency Telephone Numbers for phone numbers of additional third-party contractors.

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Handling Wastes from Chevron Products from an Off-Site Response


- THE PLANT WILL NOT TAKE WASTE FROM PRODUCT BELONGING TO OTHERS.
- Wastes from ChevronTexaco products may be returned to Oak Point with disposition to be directed by the Environmental Department. Another alternative is to have a waste treatment and disposal contractor come and pick up the wastes. In either case, do not dispose of these wastes without Environmental Department approval.

Other Responses (More Complex and/or More Distant)

For distant responses that will take more than one day to depart and return, the Oak Point Plant will usually respond with information resources – such as locating MSDS's and making phone calls to CHEMTREC (CHEMNET) or a third-party contractor. When requested by the on-scene IC, Oak Point will consider sending personnel to the scene to provide expert advice. The Section Supervisor and IC should jointly make this decision. Refer to Attachment 1 for complete details.

3.0 Definitions

CTEIC	=	ChevronTexaco Emergency Information Center
CHEMTREC	=	Chemical Transportation Emergency Center
CHEMNET	=	Chemical Network
EOC	=	Emergency Operations Center
ERM	=	The <u>Oak Point Emergency Response Manual</u>
ERV	=	Oak Point's Emergency Response Vehicle
IC	=	Incident Commander of Oak Point's ICS
ICS	=	Oak Point's Incident Command System
Local, sanctioned response	=	An off-site response that is close enough to Oak Point Plant to allow Oak Point personnel and equipment to respond and return on the same day. (Refer to Section 2.3.4.)
Off-site	=	Locations outside of Oak Point Plant
Off-site emergency	=	An on- or off-site incident that potentially poses a risk to the health, safety, and property of off-site locations
On-site	=	Locations at Oak Point Plant
Normal Business hours	=	7:00 a.m. to 4:30 p.m., Monday through Friday, except holidays
TCMT	=	The Chevron Oronite Company LLC Transportation Crisis Management Team

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4.0 References

Chevron Oronite Company LLC Off-Site Emergency Response Preparedness Process Manual

5.0 Records

Obsolete copies of this procedure shall be archived in the OPDMS in accordance with Corporate retention guidelines. Requests for review copies of documents in Archive Status shall be made in accordance with PI-113.

Record of Revisions and Reviews

Page	Revision	Date	Comments
1-17(3)	1.00	07/1993	Creation of the procedure
1-17(3)	1.01	12/1993	Miscellaneous revisions
1-17(3)	1.02	08/1994	Miscellaneous revisions to include Oronite Additives Division into ERM-6.6
1-17(24)	1.03	06/1995	Miscellaneous revisions, including the addition of Attachment D
1-17(25)	1.04	12/1995	Revised Attachment B contact list and telephone numbers
1-17(24)	1.05	07.1996	Miscellaneous revisions
1-17(28)	1.06	03/1997	Attachment C completely revised
1-17(32)	1.07	01/1999	Four (4) new chemicals added to Attachment C
1-10(23)	1.08	07/30/2004	Review of ERM, update of department personnel to reflect new organizational structure, updated signatures, revised contact list and telephone numbers, included reference RRV and application of new format.


(#) = Number of attachment pages

6.0 Attachments

Attachment 1 Summary for Handling Oronite Additives Division Off-Site Emergencies

Attachment 2 Information Sheets – Hazardous Chemicals at Oak Point Plant.

Attachment 4 Off-Site Emergency Response Incident Report (OP-182) Maintenance

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ATTACHMENT 1

SUMMARY FOR HANDLING ORONITE ADDITIVES DIVISION OFF-SITE EMERGENCIES

KEY PHONE NUMBERS (in order of priority)

- (504) 592-6371 (work)
- (504) 865-7895 (home)
- 1-800-830-2438 (Beeper)
- Brent Wood: Public Affairs Manager
- An Operator will come on line. At that time give your name and message.
- R {
- (504) 592-6432 (Work)
- (504) 908-6432 (Cell)
- (504) 281-4781 (Home) }
- Matthew Carmichael: Public Affairs Representative
- 1-800-231-0623
- ChevronTexaco Emergency Information Center (CTEIC)
- 1-800-424-9300
- CHEMTREC
- On-Call Listing
- Manager-On-Call
- X6366
- Oak Point Planner if delay of product shipment to a customer is expected (leave a message)
- 911 or
- (504) 525-6825 (24 hr #)
- (504) 342-1234 (24 hr #)
- Plaquemines Sheriff Dept.
- Louisiana Department of Environmental Quality (LDEQ)
- 504) 925-6595 (24 hr #)
- State Emergency Response Commission (State Police) (SERC)
- 1-800-424-8802
- National Response Center (NRC)
- (504) 682-0081
- Local Emergency Planning Commission (LEPC)

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ATTACHMENT 1 (Continued)

KEY FORMS

- Off-Site Emergency Response Checklist (attached)

KEY ISSUES TO REMEMBER

- Off-Site Emergencies begin either from on-site incidents or off-site transport incidents.


ORIGINATED ON-SITE

- An on-site incident with off-site affects is a category 2 or 3 emergency. Refer to the one-page "Summary for Handling Fires and Explosions" for definitions.
- The most likely causes would be a gas release, vapor cloud formation, or heavy smoke from a large fire. For an oil spill, see the "Oil Spill" one-page summary from the Field Reference Emergency Response Manual.
- The initial incident and reporting would be handled similar to the one-page "Summary for Handling Fires and Explosions" such as:
 - Person reporting, call X4444
 - Lab will record data
 - Lab will sound alarm
 - Lab will make additional calls as requested by the Staging Officer
 - Americas Region Manager, Manager-On-Call, or delegate will make additional calls per ERM-6.15, Media Relations.
- When it is determined the incident will have a significant off-site impact, notification of the Sheriff's Office, ChevronTexaco's Public Affairs, and the Manager-on-Call is key.
- Make other agency calls (LDEQ, SERC, NRC, LEPC) as outlined in the "Air Release" one-page summary from the Field Reference Emergency Response Manual.

ORIGINATED OFF-SITE (during transport)

- An off-site spill and release could come to Oak Point's attention by:
 - CHEMTREC
 - Transportation Company
 - Law enforcement agency
 - Concerned citizen
 - Chevron Oronite Company LLC's HELPLINE
- The BSU&E Shift Supervisor is the preferred or designated contact who will receive any phone calls associated with any off-site spill or release. The following are alternate contacts in the event the BSU&E Shift Supervisor cannot be reached.


Environmental Person on Call

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- The BSU&E Shift Supervisor will refer all calls related to off-site transportation emergencies to the ChevronTexaco Emergency Information Center (CTEIC) at **800-231-0623 (Intl. 510-231-0623)**.
- CTEIC will activate the Chevron Oronite Company Transportation Crisis Management Team (TCMT). A TCMT member will be responsible for coordinating emergency response efforts associated with all off-site transportation incidents.
- The BSU&E Shift Supervisor should be expected to respond to calls associated with local transportation incidents, such as leaking containers at New Orleans area wharves and inform CTEIC of the response efforts.
- The BSU&E Shift Supervisor will notify the Manager-on-Call as soon as practical after the emergency incident details are recorded.
- The three response options are:
 - Local, sanctioned response which allows equipment and materials to travel off-site. These responses must be located close enough to the Oak Point Plant to allow same day departure and return. Section 2.3.4 in ERM-6.6, for more details.
 - Distant responses which mainly allow giving information or making phone calls because any manpower or equipment response would be out of the reasonable plant guidelines of a one-day departure and return. Sending expert personnel to the scene will only be considered if requested by the on-scene IC. See Section 2.3.4 of ERM-6.6, for more details.
 - No requested assistance from Oak Point. The TCMT will handle completely.
- For the local, sanctioned response, the IC (usually the BSU&E Shift Supervisor) can decide whether or not Oak Point personnel or equipment, such as ERV/RRV, should respond off-site. ChevronTexaco Public Affairs should be notified immediately to handle the news media if the decision is made to respond off-site. The IC shall inform the Manager-on-Call of his/her actions in a timely manner.
- For distant responses that will take more than one day to depart and return, Oak Point will respond with information or phone call services if requested. Approval to send personnel will require a joint decision of the Section Supervisor and IC.
- The purpose of a local, sanctioned response is to serve our local community, especially near the Plant.
- If it is decided to send ERV/RRV and personnel off-site, follow the guidelines in Section 2.3.4 in ERM-6.6. Key concerns include limiting Oak Point's involvement to helping/assisting only and avoiding taking charge of the off-site incident.
- See ERM-6.6, Chevron Oronite Company LLC Off-Site Emergencies for more details.

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ATTACHMENT 1 (Continued)**Off-Site Emergency Response Checklist****Information Needed from Emergency Caller or Chevron Emergency Information Center (CTEIC)**

1. Emergency call received by: _____

		Name (Chevron Supervisor)	Date	Time	
2.	Caller Name / Organization				
3.	Caller Phone Number				
4.	Location of Emergency (City, State, Crossroads)				
5.	Date & Time of Emergency				
6.	Emergency Type(s)	Spill <input type="checkbox"/>	Rail <input type="checkbox"/>	Fire <input type="checkbox"/>	Exposure <input type="checkbox"/>
7.	Transportation Mode	Highway <input type="checkbox"/>	Rail <input type="checkbox"/>	Marine <input type="checkbox"/>	Air <input type="checkbox"/>
8.					
	Carrier Name	Shipment Origin	Destination		

9. Amount of Material Released (Estimate) _____
10. ChevronTexaco Product? Yes ☐ No ☐ Other ☐ Product: _____
11. CTEIC Notified? (If ChevronTexaco Product) Yes ☐ No ☐
- If answer is No, volunteer to make the call: **1-800-231-0623** CTEIC called? Yes ☐ No ☐
12. CHEMTREC and National Response Center Notified? Yes ☐ No ☐
- If Answer is NO, determine from the carrier if they want our assistance in placing the calls (i.e., on-scene personnel unable to respond properly/promptly).

Comments

- 13.
- Determine:**

On-Scene Person in Charge _____


Name

Phone No.

Fax No.

What type of assistance requested / needed (check all that apply):

- ☐ MSDS info (technical data)
- ☐ Advice
- ☐ Call CHEMTREC for 3rd party clean-up contractors
- ☐ Respond to scene with ERV (requires manager-on-call approval)
- ☐ Toxicologist (call CTEIC if ChevronTexaco Product)

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ATTACHMENT 1 (Continued)**14. Verify Status of Response**

Isolation of Area	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Containment of Spill/Run Off	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Evacuation of Area	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Protective Equipment Adequate	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Phone Calls Made:
CTEIC (if not previously notified) Yes ☐ No ☐

Person Contacted Time

Public Affairs Yes ☐ No ☐

Person Contacted Time

National Response Center (NRC) Yes ☐ No ☐

Person Contacted Time

Area O/S or Manager-on-Call Yes ☐ No ☐

Person Contacted Time
ChevronTexaco Product (in-state)

Calls above plus add:

LDEQ 504-342-1234 Yes ☐ No ☐

Person Contacted Time

SERC 504-925-6595 Yes ☐ No ☐

Person Contacted Time
ChevronTexaco Product (in-parish)

Call above 6 numbers, plus add:

Sheriff's Office 504-525-6825 Yes ☐ No ☐

Person Contacted Time

LEPC 504-682-0081 Yes ☐ No ☐

Person Contacted Time


If not Chevron Texaco product, make same calls except substitute:

CHEMTREC for CTEIC Yes ☐ No ☐

(if not previously notified)

Person Contacted Time

15. Call CHEMTREC (if CHEMTREC Originated) to update on emergency status
16. Complete COC Off-site Emergency Response Incident Report Form (Attachment B)
17. Satisfy other reporting requirements (check with Environmental Group)
18. For a transportation incident, call the carrier to get a copy of the Hazardous Material Incident Report (DOT F5800.1) for COC files. It is the carrier's responsibility to fill out this form. **This form must be forwarded to L. J. Siebert.**


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Chevron Oronite Company
Off-Site Emergency Response Report- OP-182
In case of incident contact CTEIC at 800-231-0623 (Intl. 510-231-0623)

Report Completed By/Organization		Date	
Incident Location		Incident Date	Incident Time
		Initial Contact Date	Initial Contact Time
City	State	Initially Contact By (Name/Phone #)	
Incident Scene Contact/Phone #		Contact's Organization	
Transportation Mode (off-site only)		<input type="checkbox"/> CHEMTREC <input type="checkbox"/> CEIC <input type="checkbox"/> Plant <input type="checkbox"/> Terminal <input type="checkbox"/> State Authority <input type="checkbox"/> Local Authority <input type="checkbox"/> Carrier <input type="checkbox"/> Other _____	
<input type="checkbox"/> Truck <input type="checkbox"/> Rail <input type="checkbox"/> Marine <input type="checkbox"/> Pipeline <input type="checkbox"/> Air			
Carrier Name (off-site only)		Container Size (off-site only)	Container Capacity (off-site)
Shipment Origin (off-site only)		Shipment Destination (off-site only)	
Name of Material Released		Hazardous Material	Hazardous Substance (RQ)
		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Amount of Material Released		Hazardous Substance Name	
		RQ Amount (lbs)	
Incident Classification		Release Type	
<input type="checkbox"/> Type I <input type="checkbox"/> Type II <input type="checkbox"/> Type III		<input type="checkbox"/> Spill <input type="checkbox"/> Fire <input type="checkbox"/> Other _____	
NRC Notified	If NRC Notified - Name, Date & Time of Contact	LEPC/SERC Notified	If LEPC/SERC Notified - Name, Date & Time of Contact
<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Initial COC On-Scene Response to Incident By		Name(s) /Date/Time of Initial On-Scene Response	
<input type="checkbox"/> CHEMNET <input type="checkbox"/> Incident Support Spec. <input type="checkbox"/> 3rd Party Contractor <input type="checkbox"/> COC Plant Personnel <input type="checkbox"/> Other _____		e	
Follow-up Response to Incident Scene By		Name(s) /Date/Time of Follow-up On-Scene Response	
<input type="checkbox"/> 3rd Party Contractor <input type="checkbox"/> COC Plant Personnel <input type="checkbox"/> Incident Support Spec. <input type="checkbox"/> None <input type="checkbox"/> Other _____			
COC Toxicology Contacted	COC Management Contacted - Type II & III always	Name(s) /Date/Time of COC Management Notification	
<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
COC Legal/Public Affairs Alerted		Incident Clean-up Completed (Date/Time)	
<input type="checkbox"/> Yes <input type="checkbox"/> No			
Certification Name (print)		Signature	
Title		Date	

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Attachment 1 (Continued)

Describe how the incident occurred

Describe incident emergency response actions taken

Suggested actions to improve future incident response

Additional Comments:

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ATTACHMENT 2

OAK POINT HAZARDOUS CHEMICALS

NAME	FLASH PT.	AUTO IGNIT F	VAPOR PRES.	VAPOR DENSITY	TLV PEL	COMMENTS	IMMEDIATE SAMPLING
Ammonia	Combustible	1204°F	10atm	0.6	25 ppm STEL=35 ppm	Extreme irritant to eyes, skin and respiratory system. Toxic by inhalation. Forms explosive mixtures with Boron Trifluoride	D Micro Tip
Boron Trifluoride (BF ₃)	Extremely Flammable	N/A	N/A	2.99 or 2.38	1.0 ppm	Forms explosive mixtures/Ammonia Reacts with water to form Hydrofluoric Acid and can release Hydrogen.	Micro Tip
*DETA (Diethylenetri-amine) CRG	210 F LEL=1.0% UEL=6.5%	640 F	.0000994 psi @ 70 F	3.6	1 ppm	Irritating Very heavy vapor	D Microtip PMA 2020 PS
*EDA (Ethylenediamine) CRG	105 F LEL=4.2% UEL=14.4%	ND	.015 psi @ 70 F	2.07	10 ppm	Irritating	D Microtip PMA 2020 JS
Hot Oil (Heated to or above the auto ignition temperature)	425 F	Heated above the auto ignition temp	N/A	N/A	5mg/m ³	Extreme Fire Hazard when heated to or at above its autoignition temp.	N/A
*H ₂ S (Hydrogen Sulfide) CRG	Flammable Gas LEL=4.3% UEL=45.5%	500 F	.20 atm	1.189	10 ppm STEL=15 ppm C=20 ppm	High conc. deadens sense of smell. Exposures of 500 ppm may be fatal in 30 mins.	D Passport PMA 2020LS
ISO - Butylene CIS - Butene	-100F LEL 1.8% UEL 9.7%	N/A	N/A	N/A	400 ppm	It is a flammable gas (major hazard)	Micro Tip PMA 2020 Drager Tube
*MA (Maleic Anhydride)	215 F LEL=1.4% UEL=7.1%	890 F	0.139 psi @ 104 F	3.38	0.25 ppm	Very heavy vapor Do not use Dry Chemical Extinguisher on fire	With I.H. Pump Only (SPC tubes)
*MMA (methylamine, anhydrous) CRG	Flammable Gas LEL=4.9% UEL=20.7%	806 F	N.D.	1.1	5 ppm STEL=15 ppm	Stored as a liquid under pressure. Expansion rate is high. Odor -- Ammonia (fishy)	D Passport Microtip PMA 2020 I/S
OQA's	100 - 130 F LEL=2.0% UEL=15.0%	>800 F	ND	ND	N/A		Passport PMA 2020 I/S (Total Hydro Carbons)
*Phenol CRG	172 F LEL=1.5% UEL=8.6%	1319 F	.0146 psi @ 160 F	3.24	5 ppm (Skin)	Extreme skin absorber Highly toxic by skin absorption Toxic by inhalation	D Microtip PMA 2020 I/S
P ₂ S ₅ (Phosphorus Pentasulfide)	200 F Flammable Solid LEL=0.50 oz/ft. ³	500 F	N/A	N/A	1mg/m ³ STEL=3mg/m ³	Release H ₂ S gas and heat on contact with water. Irritating corrosive	None Sample for H ₂ S
SO ₂ /SO ₃	Non-combustible	N/A	3.2 atm	2.3	2ppm STEL - 5ppm	Very irritating to eyes, mucous membranes. Moderately toxic by inhalation 400 - 500ppm - Dangerous to life and health	D Passport


D - Drager Tube

Photovac, Photoionization Air Monitor

N/A - Not Applicable

ND - Not Determined

CRG-Community Response Guidelines Micro Tip - Photo Ionization Air Monitor PMA - 2020 I/S - PE

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ATTACHMENT 2 (Continued)

AMMONIA

DESCRIPTION – DOT (1005) - Corrosive Gas (Ammonia),

- It is a colorless gas, with a pungent Ammonia odor.
- It is an extreme irritant to the eyes, skin and respiratory system. It is toxic by inhalation.

PERSONNEL EXPOSURE DATA

- TLV-PEL = TWA 25 ppm– STEL 35 ppm
- Vapor Pressure = 10 atm
- Vapor Density = .06
- Vapor will rise and be carried by the wind until it becomes heavy with water and drop to the ground.
- Vapor water soluble.

PPE - PERSONAL PROTECTIVE EQUIPMENT

- When vapor is present (above the TLV) wear a Greylite Suit with Hood.
- When vapor concentration is high, (Major leak or tank rupture etc.) wear a Hazmat Level A suit.

RESPIRATORY PROTECTION

- Scott Model 65 Full Face Piece Respirator with the Green (Amine) Cartridge for minor leaks/repairs below the STEL.
- When vapor concentration is high (above STEL -major leak or tank repair) wear Self-Contained Breathing Apparatus (SCBA) or Airline supplied Respirator.

FIRST AID


- For skin and eye exposure, flush with water for at least 15 minutes, and obtain medical assistance.
- For inhalation, remove from contaminated area. If victim is not breathing, administer CPR. When the victim is breathing, administer oxygen, if available, and obtain medical attention.

FOR SPILLS

- Approach from upwind
- Remove all ignition sources
- Evacuate and isolate
 - Use the CRG (Community Response Guidelines), CHEMTREC and the DOT Emergency Response Guide to assist in determining evacuation distances.
 - Establish Exclusion Zones
- Determine if Search and Rescue is needed and can be done with a relative degree of safety.
- Apply water to the spill or release.
 - Ammonia is 100% soluble in water.
- Contain the water solution if possible, if not flush to the Chemical Sewer (on-site) or contact the supplier for disposal instructions.
- Monitor immediate area
 - Use a MicroTip, the PMA 2020 I/S or a Draeger Tube
- Do not allow re-entry of non-emergency personnel until the Ammonia is less than 25PPM.

FOR FIRES

- Flash point = N/A (Combustible)
- Lower explosive limit (LEL) = 16%
- Upper Explosive Limit (UEL) = 25%
- Use foam, water (fog or spray), dry chemical or CO₂ for extinguishment.
- Use water fog or spray for cooling and vapor control.
- DO NOT
 - Use water streams on burning pools.
 - Allow re-entry by non-emergency personnel until the atmospheric levels are 25 PPM or less.

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ATTACHMENT 2 (Continued) BORON TRIFLUORIDE (BF₃)

DESCRIPTION – DOT (1008) – Boron Trifluoride UN 1008

- It is a fuming colorless liquid with a pungent irritating odor.
- It is extremely toxic by inhalation and a severe irritant. It is extremely corrosive (destructive) to tissues of the respiratory system and can cause death by inhalation.

PERSONNEL EXPOSURE DATA

- TLV (C) 1.0 PPM

PPE - PERSONAL PROTECTIVE EQUIPMENT

- When vapor is present (above the TLV) wear a Greylite Suit with Hood.
- When vapor concentration is high, (Major leak or tank rupture etc.) wear a Hazmat Level A suit.

RESPIRATORY EQUIPMENT

- Self Contained Breathing Apparatus or a Supplied Air Respirator

FIRST AID

- Inhalation – remove to fresh air, if not breathing give CPR. If breathing is difficult, give oxygen. Boron Trifluoride can be lethal if inhaled in high concentrations.
- For eye exposure flush with water for at least 15 minutes and obtain medical assistance.
- For skin exposure flush with water for fifteen minutes while removing clothing and obtain medical attention.


NOTE: Symptoms may be delayed.

FOR SPILLS/RELEASES

- Approach from upwind
- Evacuate and isolate
 - Use the CRG (Community Response Guidelines), CHEMTREC and the DOT Emergency Response Guide to assist in determining evacuation distances.
 - Establish Exclusion Zones
- Determine if Search and Rescue is needed and can be done with a relative degree of safety.
- Use water spray to knock down vapors.
- Vapor density is 2.38, it is heavy and will stay down near the ground.
- Monitor the immediate area
- Do not allow re-entry of non-emergency personnel until the Boron Trifluoride is less than 1 PPM.
- BF₃ is visible at concentrations above 1 ppm.

FOR FIRES

- Use water fog, spray or regular foam for cooling to keep the cylinders cool.
- Move the cylinders away from the fire if possible. Do not allow contact with Ammonia.
- Do Not:
 - Allow re-entry by non-emergency personnel until the atmospheric levels are 1 PPM or less.
 - Boron Trifluoride reacts with water to form Hydrofluoric Acid and can release hydrogen (flammable).

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ATTACHMENT 2 (Continued) DIETHYLENETRIAMINE (DETA)

DESCRIPTION - DOT - Corrosive Liquid, N.O.S. (Diethylenetriamine), 8, UN1760,PGII

- It is a water-white liquid with a mild amine order (fishy or ammonia like).
- It is a **SEVERE IRRITANT, MODERATELY TOXIC** and can be absorbed through the skin.

PERSONNEL EXPOSURE DATA

- TLV-PEL = 1 ppm
- Vapor Pressure = 0.0001 - (Not very volatile)
- Vapor Density = 3.5 - 3.6 (air = 1.0) Vapor will settle and concentrate in low areas.
- Vapor pressure is low and material should not vaporize readily.
- Prevent skin contact. It is irritating and can be absorbed through the skin.

PPE - PERSONAL PROTECTIVE EQUIPMENT

- When DETA is present, wear a Greylite Suit with Hood.

RESPIRATORY PROTECTION

- Self-Contained Breathing Apparatus (SCBA) or Airline supplied respirator.

FIRST AID


- For skin and eye exposure, flush with water for at least 15 minutes and obtain medical assistance.
- For inhalation, remove from contaminated area. If victim is not breathing, administer CPR. When the victim is breathing, administer OXYGEN, if available, and obtain medical attention.

FOR SPILLS

- Approach from upwind
- Remove all ignition sources
- Evacuate and isolate
 - No off-site impacts are expected from a release;
- Apply water to the spill or release. use water fog to control the vapor.
 - (DETA) is 100% soluble in water.
- Flush the water solution to the chemical sewer (on-site) or contact the supplier for disposal instructions (off-site).
- Monitor immediate area
 - Use a Sensidyne Pump or Drager Tube Instrument.
- Do not allow re-entry of non-emergency personnel until the Diethylenetriamine (deta) concentration is less than 1 ppm.

FOR FIRES

- Flash Point = 210 F
- Lower explosive limit (LEL) = 1.0
- Upper explosive limit (UEL) = 6.5
- Use foam, water, fog or spray, dry chemical or CO₂ or extinguishment.
- Use water fog or spray for cooling and vapor control.
- Do Not use water streams on burning pools.
- Do Not allow re-entry by non-emergency personnel until the Atmospheric levels are 1 ppm or less.

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ATTACHMENT 2 (Continued) ETHYLENEDIAMINE (EDA)

DESCRIPTION - DOT - Ethylenediamine, 8, UN1604,PGII

- It is a water-white liquid with strong amine order (fishy or ammonia like).
- It is a **SEVERE IRRITANT, POTENTIAL SENSITIZER and COMBUSTIBLE** (Flash point 100 F to 230 F). It can be absorbed through the skin.

PERSONNEL EXPOSURE DATA

- TLV-PEL = 10 ppm
- Vapor pressure = 0.015 psi
- Vapor density = 2.07 (air = 1.0). Vapor will settle and concentrate in low areas.
- Prevent skin contact with liquid. It is a corrosive, irritating, and may be absorbed through the skin.

PPE - PERSONAL PROTECTIVE EQUIPMENT

- For emergency exposures, wear a Greylite Suit with Hood.

RESPIRATORY PROTECTION

- Self-Contained breathing apparatus (SCBA) or Airline supplied Respirator.

FIRST AID


- For skin and eye exposure, flush with water for at least 15 mins. and obtain medical assistance.
- For inhalation, REMOVE FROM CONTAMINATED AREA. If victim is not breathing, administer CPR. When the victim is breathing, administer OXYGEN, if available, and obtain MEDICAL ATTENTION.

FOR SPILLS

- Approach from upwind
- Remove all ignition sources
- Evacuate and isolate
 - Isolate for 1/2 mile in all directions.
- Apply water to the spill or release. use Water Fog, to control the Vapor.
 - Ethylenediamine (eda) is 100% soluble in water.
- Flush the water solution to the chemical sewer (on-site) or contact the Supplier for disposal instructions (off-site).
- Monitor immediate area
 - Use a Sensidyne Pump or Drager Tube Instrument.
- Do not allow re-entry of Non-Emergency Personnel until the Ethylenediamine (EDA) concentration is 10 ppm or less.

FOR FIRE

- Flash Point = 105 F
- Lower Explosive Limit (LEL) = 4.2%
- Upper Explosive Limit (UEL) = 14.4%
- Use foam, CO₂, or dry chemical for extinguishment.
- Use Water Fog or Spray for cooling and vapor control.
- Do Not Use Water Streams on Burning Pools.
- Do Not Allow re-entry by Non-Emergency Personnel until the Atmospheric levels are 10 ppm or less.

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ATTACHMENT 2 (Continued)

HOT OIL

DESCRIPTION - DOT - Not transported in "Hot" state

- It is a brown to brownish green base oil.
- It is not a hazardous chemical. However, it is heated to above it's Flash Point in the normal operation of the hot oil system.

PERSONNEL EXPOSURE DATA

- TLV-PEL = 5mg./m³
Oil is heated to (above the flash point).

PPE - PERSONAL PROTECTIVE EQUIPMENT

- Fire Fighting Bunker Gear

RESPIRATORY PROTECTION


- Self-Contained Breathing Apparatus (SCBA) for resulting fire if fire is present (primarily for smoke inhalation).

FIRST AID

- For eye exposure, flush with water for at least 15 mins. and obtain Medical Assistance as soon as possible.
- For skin exposure flush with water, cover with clean dry dressings and obtain Medical Attention as soon as possible.

FOR LEAKS, SPILLS and FIRE

- Flash Point = 425 F
- Lower Explosive Limit (LEL) = not determined
- Upper Explosive Limit (UEL) = not determined
- In operation, hot oil is above the Flash Point and will ignite on contact with air.
- Use Dry Chemical for extinguishment.
- Use Foam to prevent re-ignition and burning under the leak.
- Use Water Spray or Fog to cool adjacent facilities.
- Turn off oil flow at the nearest valve.
- Do not use Water Streams on Burning Pools.
- For removal of Residual Material, allow to cool. Then absorb or vacuum up material. Take vacuumed or absorbed material to the Incinerator.

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ATTACHMENT 2 (Continued)

HYDROGEN SULFIDE (H₂S)

DESCRIPTION - DOT - Not shipped. Generated and releases are possible from certain processes.

- It is a colorless gas with an odor of Rotten Eggs (High concentrations deadens ability to smell).
- It is **IRRITATING, TOXIC and FLAMMABLE** (Flash point less than 100 F).

PERSONNEL EXPOSURE DATA

- TLV-PEL = 10 ppm
- STEL (short term exposure limit) = 15 ppm
- C (ceiling limit) = 20 ppm
- **HIGHLY TOXIC** at levels greater than 100 ppm.
- Vapor Density = 1.189 (air = 1.0)
- Vapor may settle and concentrate in low areas.
- H₂S deadens the sense of smell. **ODOR** can not be used as an indication H₂S is present.

PPE - PERSONAL PROTECTIVE EQUIPMENT

- For exposures to Hydrogen Sulfide, wear a Greylite Suit with Hood.

RESPIRATORY PROTECTION

- Self-contained Breathing Apparatus (SCBA) or Airline supplied Respirator.

FIRST AID


- For skin and eye exposure, flush with water for at least 15 mins. and obtain Medical Assistance.
- For inhalation, remove from contaminated area. If victim is not breathing, administer CPR. When the victim is breathing, administer H₂O, if available, & obtain Medical Attention.

FOR A GAS OR VAPOR RELEASE

- Approach from upwind
- Remove all ignition sources
- Evacuate and isolate
 - Off-site impacts can be expected from a large release. Refer to the Community Response Guidelines for more information.
- Monitor immediate area
 - Use Passport or DRAGER TUBE instrument
 - 1% LEL = 43,000 ppm
- Do not allow re-entry of Non-Emergency Personnel until the H₂S concentration is less than 10 ppm.

FOR FIRE

- Lower Explosive Limit (LEL) = 4.3%
- Upper Explosive Limit (UEL) = 45.5%
- Autoignition Temperature = 500 F
- Stop Gas Flow if possible
- Use Water Fog or Spray for cooling unless danger of contact with Phosphorus Pentasulfide exists.
- Do Not Extinguish fire at a Point Source Leak.
- Do Not Allow re-entry by Non-Emergency Personnel until the Atmospheric Levels are 10 ppm H₂S or less.

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ATTACHMENT 2 (Continued) **ISOBUTYLENE (CIS-BUTENE)**

DESCRIPTION – DOT 1075, 1012

- It is a colorless gas.
- It is an asphyxiant gas
- It is a flammable gas (major hazard).

PPE - PERSONAL PROTECTIVE EQUIPMENT

- In emergency situations wear complete Bunker Gear.

RESPIRATORY PROTECTION

- In emergency situation wear Self Contained Breathing Apparatus SCBA

FIRST AID


- Move victim to fresh air, obtain medical assistance.
- Apply CPR if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing.
 - Clothing frozen to skin should be thawed before being removed.
- Obtain medical attention

FOR SPILLS

- Approach from upwind.
- Remove all ignition sources
- All equipment used when handling this equipment must be grounded.
- Stop leak if possible with minimal risk.
- Turn leaking containers over so gas escapes rather than liquid.
- Use water spray to reduce and disperse vapors.
- Evacuate and Isolate
 - Use the CRG (Community Response Guidelines), CHEMTREC and the DOT Emergency Response Guide to assist in determining evacuation distances.
 - Establish Exclusion Zones
- Determine if Search and Rescue is needed and can be done with a relative degree of safety.
- Apply water to the spill. Use Water Fog, to control; the vapor.
- Contact the Supplier for disposal instructions.
- Monitor the immediate area.
 - Use the MicroTip, the PMA 2020 I/S or a Draeger Tube (Total Hydrocarbons)
- Do not allow re-entry of non-emergency personnel until Isobutylene is 400 PPM or less.

FOR FIRES

- Flash Point = -100 F
- Lower Explosive Limit (LEL) = 1.8%
- Upper Explosive Limit (UEL) = 9.7%
- Do not extinguish unless leak can be stopped.
- Use Foam CO₂, or Dry Chemical for extinguishment.
- Use Water Fog or Spray for cooling and vapor control
- Fight fire from a distance use portable monitors.
- Cool containers with water well after the fire is out.
- Withdraw immediately in case of:
 - 1) Rising sounds
 - 2) Venting safety devices
 - 3) Discoloration of tank
- Do Not Use Water Fog or Spray on Contained Burning Pools
- Do Not Allow re-entry by non-emergency personnel until the Atmospheric levels are 400 PPM or less.

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ATTACHMENT 2 (Continued) MALEIC ANHYDRIDE (MA)

DESCRIPTION - DOT - Maleic Anhydride, 8, UN2215,PGIII

- It is a white to black crystalline solid/liquid with a sharp acrid odor.
- It is a **SEVERE IRRITANT, CORROSIVE** and **COMBUSTIBLE** (Flash point 100 F to 230 F).

PERSONNEL EXPOSURE DATA

- TLV-PEL = 0.25 ppm (1mg/m₃)
- Vapor Pressure = 0.139 psi, moderately high
- Vapor Density = 3.38 (air = 1.0). Vapor will settle and concentrate in low areas.
- Prevent skin contact.
- Keep away from Caustic, other Strong Bases, Amines and Dry Chemical Fire Fighting Material.

PPE - PERSONAL PROTECTIVE EQUIPMENT

- For exposures to MA vapors, wear a Greylite Suit with Hood.

RESPIRATORY PROTECTION

- Self-Contained Breathing Apparatus (SCBA) or Airline supplied Respirator.

FIRST AID


- For skin and eye exposure, flush with water for at least 15 mins. and obtain Medical Assistance.
- For inhalation, remove from contaminated area. If victim is not breathing, administer CPR. When the victim is breathing, administer OXYGEN, if available, and obtain Medical Attention.

FOR SPILLS

- Approach from Upwind
- Remove all ignition sources
- Evacuate and isolate
 - No off-site impacts are expected from a release;
- Use Water Fog to control the Vapor
 - Maleic Anhydride is combustible (Flash point 100 F to 230 F).
 - Maleic Anhydride dust may form an explosive mixture with air.
- Monitor for Maleic Anhydride
 - Use Drager Tube or Sensidyne Pump.
- Do not allow re-entry of Non-Emergency Personnel until the Maleic Anhydride (ma) concentration is less than 0.25 ppm (1mg/m³).
- Remove to U&F for incineration (on-site) or contact the supplier for disposal information (off-site).

FOR FIRE

- Flash Point = 215 F
- Lower Explosive Limit (LEL) = 1.4%
- Upper Explosive Limit (UEL) = 7.1%
- Vapor forms explosive mixtures with air.
- Use Water Fog, Foam or Carbon Dioxide for extinguishment.
- **DO NOT USE DRY CHEMICAL**
 - Produces large volumes of gases that could rupture the equipment.

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ATTACHMENT 2 (Continued) METHYLAMINE, ANHYDROUS (MMA)

DESCRIPTION - DOT -Methylamine, Anhydrous, 2.1, UN1061

- It is a colorless gas with a FISHY OR AMMONIA type odor.
- It is **IRRITATING, CORROSIVE, TOXIC** and **FLAMMABLE** (Flash point less than 100 F).

PERSONNEL EXPOSURE DATA

- TLV-PEL = 5 ppm
- STEL = 15 ppm
- **HIGHLY TOXIC** at high concentrations

PPE - PERSONAL PROTECTIVE EQUIPMENT

- For exposures to MMA vapors, wear a Greylite suit with Hood.

RESPIRATORY PROTECTION

- Self-Contained Breathing Apparatus (SCBA) or Airline supplied Respirator.

FIRST AID


- For skin and eye exposure, flush with water for at least 15 mins. and obtain Medical Assistance.
- For inhalation, remove from contaminated area. If victim is not breathing, administer CPR. When the victim is breathing, administer oxygen, if available, and obtain medical attention.

FOR A SPILL AND/OR GAS OR VAPOR RELEASE

- Approach from Upwind
- Remove all ignition sources
- Evacuate and isolate
 - Off-site impacts can be expected from any release. Refer to the Community Response Guidelines for more information.
- Apply Water to the spill or release. Use Water Fog, Spray, or deluge to control Vapor.
 - MMA is 100% soluble in water - Water Solutions can be flammable.
- Flush Water Solution to the Chemical Sewer (on-site) or contact the Supplier for Disposal Instructions (off-site).
- Monitor immediate area
 - Use Passport, determine percent of LEL
1% lel = 49,000 ppm
- Do Not allow re-entry of Non-Emergency Personnel until the Monomethylamine (MMA) concentration is less than 5 ppm.

FOR FIRE

- Lower Explosive Limit (LEL) = 4.9%
- Upper Explosive Limit (UEL) = 20.7%
- Stop Gas Flow, if possible
 - Use Water Fog or Spray for cooling and to eliminate or reduce vapors.
- Solutions of Monomethylamine and water can be flammable.
- Do Not Extinguish fire at a Point Source Leak.
- Do Not Allow re-entry by Non-Emergency Personnel until the atmospheric levels are 5 ppm MMA or less.

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ATTACHMENT 2 (Continued) OGA PRODUCTS

DESCRIPTION - DOT - Petroleum Products, N.O.S., Combustible Liquid, UN1268,PGIII

- They are amber to dark brown liquids with a petroleum solvent smell.
- They are **IRRITANTS** and **COMBUSTIBLE** (Flash point 100 f to 230 F).
- They may cause **ALLERGIC SKIN REACTIONS**.

PERSONNEL EXPOSURE DATA

- TLV-PEL = None determined

PPE - PERSONAL PROTECTIVE EQUIPMENT

- For large spills, wear a Greylite Suit.

RESPIRATORY PROTECTION

- For large spill, use Self-Contained Breathing Apparatus (SCBA) or Airline supplied Respirator.

FIRST AID


- For skin and eye exposure, flush with Water for at least 15 Mins. And obtain Medical Assistance.
- For inhalation, remove from Contaminated area. If victim is not breathing, administer CPR. When the victim is breathing, administer Oxygen, if available, and obtain Medical Attention.

FOR SPILLS

- Approach from upwind
- Remove all Ignition Sources
- Evacuate and Isolate
 - Per the DOT Emergency Response Guide isolate for 1/2 mile in all directions if fire and explosion hazards are present.
- Containing the spill by diking, absorb and/or vacuum Liquid Material for future disposal. Notify Environmental for final Emergency Information Center (CEIC) (Off-Site).
- Monitor the immediate area for the Lower Explosive Limit (LEL).
- Do not permit entry of Non-Emergency Personnel until the danger of a Flash Fire no longer exists.

FOR FIRE

- Flash Point = 100 F to <230 F (check MSDS for specific OGA Product)
- Lower Explosive Limit (LEL) = 2.0%
- Upper Explosive Limit (UEL) = 15.0%
- Use Foam, Dry Chemical, CO₂ or Water Spray or Fog for extinguishment.
- Do Not Use water streams on burning pools.
- Do Not Allow re-entry by Non-Emergency Personnel until the danger of a Flash Fire or re-ignition is over.

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ATTACHMENT 2 (Continued)

PHENOL

DESCRIPTION - DOT - Phenol, Molten, 6.1, UN2312, PGII

- It is a colorless to light pink solid/liquid with a characteristic sweet order.
- It is an **IRRITANT, CORROSIVE, TOXIC and COMBUSTIBLE**, (Flash point 100 f to 230 F). It is very toxic by skin absorption.

PERSONNEL EXPOSURE DATA

- TLV-PEL = 5 ppm
- Avoid Skin Contact.
- Phenol is readily absorbed through the skin and is **HIGHLY TOXIC** by this route of entry.

PPE - PERSONAL PROTECTIVE EQUIPMENT

- For spills and releases, wear an **ACID SUIT GREEN**. Avoid skin contact.

RESPIRATORY PROTECTION

- Self-Contained Breathing Apparatus (SCBA) or Airline supplied Respirator.

FIRST AID


- For eye exposure, flush with water for at least 15 mins. and obtain Medical Assistance. This is very important for Phenol.
- For skin exposure, flush with water for at 5-10 mins. apply PEG 400 then rinse with water per the guidelines attached to the PEG bottle in the Plant First Aid cabinets or with the Plant Nurse. Then obtain Medical Assistance.
- For inhalation, remove from contaminated area. If victim is not breathing, administer CPR. When the victim is breathing, administer oxygen, if available, and obtain Medical Attention.

FOR SPILLS

- Approach from upwind
- Remove all ignition sources
- Evacuate and Isolate
 - Off-site impacts can be expected from a large release. Refer to the Community Response Guidelines for more information.
- Use Water Fog or Spray to control the vapor, phenol is partially soluble in water.
- Monitor for phenol
 - Use a drager tube instrument
- Do not allow re-entry of Non-Emergency Personnel until the phenol concentration is less than 5 ppm.
- Keep out of the storm system (urgent) due to permit limits.
- Flush to the chemical sewer with excess water (on-site) or contact supplier for disposal information (off-site).

FOR FIRE

- Flash Point = 172 F
- Lower Explosive Limit (LEL) = 1.5%
- Upper Explosive Limit (UEL) = 8.6%
- Use Alcohol Foam, Carbon Dioxide or Dry Chemical for extinguishment.
- Use Water Fog or Spray to keep exposed Tanks cool and control vapor.
 - Phenol is partially soluble in water.

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ATTACHMENT 2 (Continued)

PHOSPHORUS PENTASULFIDE (P₂S₅)

DESCRIPTION - DOT - Phosphorus Pentasulfide, 4.3, UN1340,PGII

- It is a yellow solid.
- It is **IRRITATING, TOXIC** and a **FLAMMABLE SOLID**. (Forms ignitable dust mixtures with air.)

PERSONNEL EXPOSURE DATA

- TLV-PEL = 1mg./m₃ (Dust)
- STEL = 3mg./m³ (Dust)
- When Phosphorus Pentasulfide is mixed with water, alcohols, and some other chemicals Hydrogen Sulfide is released.

PPE - PERSONAL PROTECTIVE EQUIPMENT

- Wear a Greylite Suit with Hood.

RESPIRATORY PROTECTION

- Use a Self-Contained Breathing Apparatus (SCBA) or Airline supplied Respirator when there is dust in the air or the level of hydrogen sulfide gas is noticeable.

FIRST AID


- For skin and eye exposure, flush with water for at least 15 mins. And obtain Medical Assistance.
- For inhalation, remove from Contaminated area. If victim is not breathing, administer CPR. When the victim is breathing, administer OXYGEN, if available, and obtain Medical Attention.

FOR SMALL SPILLS

- Approach from upwind
- Remove all Ignition Sources
- Cover with an Inert Solid such as sand
 - Use Non-Sparking tools
- Evacuate and isolate
 - Per the DOT Emergency Response Guide, isolate hazard area and deny entry.
- Cover the above with plastic
 - To keep dry and prevent Hydrogen Sulfide (H₂S) release.
- Remove to U&F for Incineration (on-site) or contact the Supplier for Disposal information (off-site).
- Monitor for Hydrogen Sulfide (H₂S) Gas
 - Use the Passport or Drager Tube Instrument
 - 1% LEL = 10,000 ppm

FOR LARGE SPILLS OR FIRES

- Approach from upwind
- Remove all Ignition Sources
- Evacuate and isolate
 - Use safer Maps, the DOT Emergency Response Guide to assist in determining distances.
- Cover the Spill or Fire with an Inert, Dry Solid such as Sand.
 - Use Non-Sparking tools
 - Do Not use water
- Monitor the area for Hydrogen Sulfide (H₂S)
- Do Not allow re-entry of Non-Emergency Personnel until the Hydrogen Sulfide (H₂S) concentration is less than 10 ppm.
 - Use the GX-82 concentration or Drager Tube Instrument.
- Remove to U&F for Incineration (on-site) or contact the Supplier for Disposal Instructions (off-site).

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ATTACHMENT 2 (Continued)

SULFUR DIOXIDE/SULFUR TRIOXIDE

DESCRIPTION – DOT (137)

- It is generated and may be released from sulfonic acid manufacturing and degassing operations.
- It is a colorless gas or liquid with sharp irritating pungent odor.
- Sulfur Trioxide exists in three forms. It is a multi-phase material and may exist as a solid, liquid and gas. The solid sublimates readily.
- It is highly toxic and a strong tissue irritant.

PERSONNEL EXPOSURE DATA

- TLV (PEL) = 2 ppm – STEL 5 ppm
NIOSH, IDLH = 100 ppm Highly Toxic @ levels over 100 ppm

PPE - PERSONAL PROTECTIVE EQUIPMENT

- At levels from 5-50 ppm, wear a Greylite Suit with Hood.
- At levels of 50 ppm and greater wear the fully encapsulated Level-A suit.

RESPIRATORY PROTECTION

- At levels of less than 2 ppm use the SCOTT Model 65 with organic acid gas (yellow) cartridges.
- At levels of 2 ppm and above wear SCBA.

FIRST AID

For skin and eye exposure, flush with:


- Water for at least 15 minutes, and obtain medical assistance.
- For inhalation, remove from contaminated area. If victim is not breathing, administer CPR. When the victim is breathing, administer OXYGEN, if available, and obtain MEDICAL ATTENTION.

FOR SPILLS

- Approach from upwind
- Evacuate and isolate
- Apply water to the release, use Water Fog or Spray to control the vapor.
- Use a Passport with SO₂ capability to monitor the area.
- Do not allow re-entry of non-emergency personnel until the SO₂/SO₃ concentration is 2 ppm or less.

FOR FIRES

- SO₂/SO₃ does not burn, but tanks and cylinders may explode due to EXCESS PRESSURE caused by heat.
- Keep tanks or cylinders of SO₂/SO₃ in the fire area cool to prevent a pressure explosion.
- Remove cylinders from the fire area if possible without danger to the emergency personnel. }

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ATTACHMENT 2 (Continued)

MONITORING INSTRUMENTS


DRAEGER TUBE
UNIVERSAL + OR - 25%

PASSPORT
FLAMMABLE SOLVENTS BY % OF LEL
H₂S BY PPM, SO₂ BY PPM,
CO BY PPM

MICROTIP
H₂S, ALL AMINES, PHENOL + OR - 25%

PMA 2020I/S
H₂S ALL AMINES, PHENOL + OR - 25%
OTHER COMMON CHEMICALS

ACCURACY
TLV/PEL = 10ppm x .25 - 2.5
The range is 7.5 ppm to 12.5 ppm

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ATTACHMENT 3

OFF-SITE EMERGENCY RESPONSE INCIDENT REPORT (OP-182) MAINTENANCE

INTRODUCTION

The Chevron Oronite Company LLC Off-Site Emergency Response Process requires that an Incident Report be completed within seven days of a distribution incident. Within Chevron Oronite, this report will be prepared by a member of the Chevron Oronite Company Transportation Crisis Management Team (TCMT), unless requested/required for Oak Point to fill out the report for a local transportation incident. The incident will be documented on the Chevron Oronite Company LLC Off-Site Emergency Response Incident Report, OP-182, (See Attachment 2).

Coupled with all procedures in ERM-6.6, this procedure helps meet the requirements for Internal Reporting and Investigation of Chemical Distribution Incidents and Implementation of Preventive Measures, as required by Responsible Care® Distribution Code Management Practice 1.3.

Upon completion of an incident report by the TCMT member, copies of the Incident Report are distributed to:

- The Responsible Care Distribution Code coordinator (For ACC Reporting)
- The COC TCMT Team Leader

This document describes the standard operating procedure, carried out by the TCMT Team Leader once an Incident Report (OP-182) is received.

PROCEDURE

1. Upon receipt of a OP-182, the TCMT Team Leader reviews the document to:
 - verify that all applicable incident information has been included on the CHM-182 (missing key information will be obtained from the TCMT member that completed the CHM-182);
 - gain information on the distribution incident;
 - consider company-wide emergency response process improvements; and
 - identify and propose company-wide distribution process improvements that might prevent similar future incidents.
2. Following the entering of key data into the Shared Folder, completed OP-182 forms are filed in the "Incident Reports" file, maintained by the TCMT Team Leader.
3. COC reports incidents yearly to the ACC via their web site
4. At semi-annual COC TCMT Meetings, incident information received on the OP-182 forms is discussed. This information, in conjunction with incident information contributed by the CTEIC, provides the foundation for committee discussions on off-site emergency response process improvements within Chevron Oronite Company LLC.

It is the responsibility of the Responsible Care/Policy 530 Supervisor to review this procedure every two (2) years. This review will be noted by changing the procedure date to the appropriate review date.

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APPROVAL

<p>ORIGINATED</p> <p>SAFETY SPECIALIST</p> <p>S. J. STUNTZ</p>	<p>REVIEWED</p> <p>HEALTH & SAFETY SUPERVISOR</p> <p>G. A. CREEKMORE</p>	<p>AUTHORIZED</p> <p>AMERICAS REGION MANAGER</p> <p>M. H. BURNSIDE</p>
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DISTRIBUTION

HARD COPY

13 Controlled Copies

ERM Reference Manual Distribution List


Hard Copies, other than those listed in the Distribution List above, shall be considered uncontrolled copies and will not be updated.

OPDMS

All networked personal computers shall have access to the most current version of this Procedure in accordance with PI-111, "Control of Quality Assurance Related Documents and Procedures."




EMPOWERED TO EXCEL

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1.0 Introduction/Scope

The purpose of this document is to acquaint Oak Point personnel with Oak Point's strategy and tactics for firefighting.

"Strategy" refers to an overall plan of action for achieving a goal.

"Tactics" refers to specific procedures and skills used to carry out the plan of action.

All Oak Point personnel who may become involved in an emergency response to a fire should be familiar with the information in this document.

2.0 Strategy & Tactics Procedures

2.1 Water Management

2.1.1 Strategy for Water Management

Water-Source Strategy

Oak Point takes water from the Mississippi River for the following uses:

- Firefighting
- Cooling water system

The aim of water management is to make sure that water is available for firefighting when it is needed.

Water-Quantity Strategy

The Oak Point Plant has three water pumps. They are:


- An electrical cooling-water pump maintains a constant primary pressure of 75-78 psig at the fire monitors and fire hydrants.
- A backup pump, operating on natural gas, is on standby status in case Oak Point loses electrical power.
- A { diesel engine-driven, } fire-water booster pump that increases the fire-water pressure to 120-130 psig. In the case of fire, the U&F Boiler Operator will activate it manually.

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Oak Point wants to keep the fire-water pressure at or below 130 psig. A greater pressure could damage the piping system.

Strategy for Using Outside Help

Oak Point has made arrangements so that it can get additional water flow and/or water pressure with the help of either the BCFVD and/or the Belle Chasse Ferry. See "Tactics for Water Management" (following).

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2.1.2 Tactics for Water Management

Water Pressure Tactics

R When the Oak Point emergency alarm sounds, U&F will manually activate the { diesel } booster fire-water pump to boost water pressure at the fire hydrants and fire monitors to 125-130 psig. This action will increase water flow at each of the hose nozzles from between 95 and 125 GPM. In addition to meeting the needs of the fire hydrants and fire monitors, this water flow will also take care of the needs of the following equipment:

- R
- The ERV needs 95 GPM for its foam eductors to work effectively.
 - The foam eductors on the foam cart need at least 95 GPM.
 - { RRV can also be used to supply 350 gpm at 95-130 psi independent of the plant firewater system with a 350 gallon capacity tank or with an unlimited supply of by connecting to a plant hydrant. }

Tactics for Using Outside Help


If it becomes necessary for outside agencies to assist the Oak Point Operations Group in handling an emergency, two agencies have additional pumping equipment to increase the pressure and/or volume of water available.

- The BCVFD can boost the pressure to their fire hoses using one of their truck pumps. They also have a portable pump that can pump water from the river to the Oak Point piping system. This can be done by placing a suction hose in the river and connecting it to the nearest hydrant, which is located by the natural gas backup pump.
- The Belle Chasse Ferry can connect its pumping system to Oak Point's piping system via compatible hook ups on Oak Point's wharf. The Ferry then could supply additional water and/or water pressure to Oak Point's piping system.

Tactics for Handling Water Difficulties

Firefighters should take care to avoid the following problems that could result from using water to fight fires:

- **Pooling.** Avoid letting water mix with flammable or combustible material and then collect in a contained area. If this happens, cover the pool with inert material such as foam or dry chemical.
- **Spreading the fire.** When using a stream of water, make sure it does not push the burning material into adjacent areas, thereby increasing the size of the fire and possibly igniting additional fuel sources.
- **Flooding the Plant.** Be careful not to use so much water that the storm-water basin fills up, backing up water into the Plant. Flooding at the fire scene could (a) spread the fire and (b) restrict the movement of emergency personnel and equipment.

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2.2 Fire Hose Use and Capacity

2.2.1 Strategy for Use of Fire Hoses

Oak Point has placed firefighting equipment and apparatuses in strategic locations around the plant, as follows:


- Fire hydrants in strategic locations.
- Fire monitors in locations where there are special needs such as extra reach or greater cooling water requirements.
- Fire hoses on the ERV and on the numerous Fire hose cabinets stationed throughout the Plant.
- Portable hose holders for 1½-inch hoses:
 - Two stored in the ERV garage as backups
- Two portable 500 gpm monitors.
 - One stored at Fire Station #1 (3rd and G street)
 - One stored at Fire Station #5 (6th and D street)

2.2.2 Tactics for the Use of Fire Hoses

Hose Use

Normal step-by-step procedure:

1. Attach 2½-inch hoses directly to fire hydrants.
2. Use 2½-inch hoses -- NOT 1½-inch hoses -- to bring water to the fire scene. Smaller diameter hoses lose more pressure than do larger diameter hoses. For example:
 - A 2½-inch hose will lose 1.3 psig every 100 feet at 100 GPM.
 - A 1½-inch hose will lose 21 psig every 100 feet at 100 GPM; i.e., a 1½-hose will lose more than sixteen times as much pressure as a 2½-inch hose.
3. Attach each 2½-inch hose (feeder stream) to gated wyes at the fire scene. A gated wye has three connections: one 2½-inch feeder connection and two 1½-inch branch hose connections.
4. Attach 1½-inch hoses to the two open connections of the gated wye, or attach one 1½-inch hose with a reducer on the 2½-inch feeder hose.
5. Use 1½-inch hoses (a) to attack the fire and (b) to cool tanks, drums, structures, etc.
 - Rule of thumb: For one stream of water, keep the number of 50-foot sections of 1½-inch hoses that are connected in series to three or less.
 - Make sure that enough 1½-inch hose lines are available at each fire station to allow the firefighting team to exit safely from the fire.

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6. Use portable hose holders (stored in the ERV garage) where appropriate to hold the 1½-inch hoses in place to supply a steady stream of cooling water at the scene. Hose holders provide the following benefits:

- Can be set up in spots closer to the fire than a firefighter could stand safely or comfortably.
- Can save manpower by freeing firefighters for other duties.
- Can allow firefighters to rest and avoid fatigue.

Fire Hose Locations

Fire Hose cabinets hold approximately 200 feet of 1½-inch hoses and 200 feet of 2½-inch hoses.

The ERV carries the following hoses and related equipment:

- 400 total feet of 2½-inch water hoses
- 200 total feet of 1½-inch water hoses
- Two portable hose holders (Two more are stored in the ERV garage.)
- 300 total feet of 1½-inch foam application hoses (150 feet for each eductor, one on each side of the ERV)
- Turbojet nozzles for applying foam close by
- Foam playpipes for applying foam at a greater distance

2.3 Fire Extinguishment

2.3.1 Strategy

Fire Chemistry

All ordinary fires (i.e., fires that do NOT produce their own oxygen) need four things:


- Fuel - - heated above its flash point
- Oxygen
- Heat (ignition source)
- Chemical chain reaction - - needed to sustain combustion

If you remove one or more of these factors, the fire will go out.

Strategy for Fire Extinguishment

Strategies for extinguishing fires:

- **Quenching** -- cools the burning material to a point below its flash point by laying on a cooling agent. Water gives good results as a cooling agent. Quenching works best on solids and liquids that have high flash points.

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- **Smothering** – takes oxygen away from the fire by placing an inert barrier between the fuel-vapor source and the surrounding air. Inert barriers include:
 - A physical cover such as a lid, sand, or dirt
 - A layer of foam
 - Steam or inert gases such as CO₂ and N₂
- **Flame Suppression** – uses inert liquids or solids to absorb or reflect some of the heat radiating from the fire, thereby reducing the temperature of the flames. For example: When a fine spray (fog) of water is sprayed on a fire, the water droplets will absorb heat. Some will evaporate. The evaporating water droplets become steam, thus removing heat from the surroundings.


Water droplets that land on solids in the area will act to keep the solids cool by (a) evaporating (i.e., absorbing heat) and (b) reflecting the heat being radiated from the fire.
- **Flame Propagation Interruption** – interrupts the chemical chain reaction of the fire by laying on inert materials such as dry-chemical or halogenated-hydrocarbon extinguishing agents.
- **Starvation** – controls fires by the following methods:
 - Mechanically removing or sealing off the fuel from the fire
 - Diverting or shutting off the flow of liquids or gasses that are fueling the fire
 - Flushing the fuel away from the fire
 - Other means that result in taking the fuel away from the fire
- **Exhaustion** – allows the fire to burn until its fuel is exhausted. Firefighters try to (a) keep the fire from spreading and (b) prevent or reduce damage to neighboring areas. Exhaustion can be used when the situation meets the following criteria:
 - When efforts to extinguish the fire could potentially endanger firefighting personnel.
 - When the fire is NOT likely to spread or become hazardous.
 - When the fire will cause only limited additional economic loss.

2.3.2 Tactics: Specific Equipment and Methods

Water Tactics

Water may be used on any type of fire that does NOT involve:

- A water reactive material such as P₂S₅
- Electrical equipment
- Liquid fires where a stream of water could move the burning liquid, thereby spreading the fire

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Water may be applied to the fire situation with the following methods:

- Trained O&M personnel holding 1½-inch hoses (primarily for cooling adjacent Structures)
- Portable hose holders holding 1½-inch hoses
- Fixed fire monitors
- Portable Fire Monitors

Fire hoses have nozzles that can deliver variable patterns that include water fogs, sprays, and straight streams. The appropriate choice depends upon the specifics of the fire situation and the layout of the area.

Water Fog

A water fog offers the following advantages:

- Highest heat absorption
- Maximum steam production
- Least runoff

Drawbacks to the use of a water fog:

- Lack of penetration
- Firefighters must stand relatively close to the fire in order to apply a water fog effectively.

Use water fogs for the following:

- To fight flammable liquid fires
- To defensively protect personnel
- To disperse (dilute) flammable vapors
- To move burning fuels
- To cool areas or equipment close to the fire

Straight Water Streams


Straight water streams offer the following advantages:

- Maximum penetration
- Power at a distance

Therefore, straight water streams work best when directed at a fixed source of fuel and at the heat of a fire.

Straight water streams have the following drawbacks:

- High volume of water
- High runoff
- Poor cooling of radiant heat
- Poor personnel protection

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NOTE: Be sure when attacking an uncontained liquid fire that a water stream does not move the liquid and hence spread the fire.

Water streams must be applied effectively. An effective water stream has the following characteristics:

- Widest spray pattern needed
- Greatest velocity that will reach the fire area
- Covers the involved fire area

Firefighters must adjust water streams to obtain the most effective use of water. Adjustments must be made carefully and slowly while watching for signs of their effectiveness on the fire. Quick or sudden nozzle adjustments must be avoided to prevent excessive shock to equipment and/or personnel.

Fire Monitors

Oak Point has installed fixed fire monitors at locations where they are most likely to be used effectively. Once firefighters turn them on and set the direction of the water stream, they can stand back; i.e., fire monitors, once set, do not need constant attention if used for cooling. However, they should be attended if they are used to attack a fire or to protect a firefighting team.

Foam Tactics

Foam can be used very effectively on all of the flammable and combustible liquids found at the Oak Point Plant. It can be used on flammable and combustible liquids, including the following:

- Alcohols
- Flammable solvents
- Oil base materials

To be effective, firefighters must put on enough foam to (a) smother the entire flame area and (b) keep it covered until it has cooled sufficiently so that it will not re-ignite.

Foam cannot be used effectively on pressure fires.


Foam use on tanks should be limited to cases where the tank roof has lifted.

Beware of frothing or boiling over. Frothing may occur when foam or water is applied to a nearly-full tank. The conditions that could lead to boiling over are not likely to be present at the Oak Point Plant.

Oak Point's foam units:

- The ERV serves as Oak Point's main source of foam.
- The foam cart serves as a backup unit.
- RRV has a pre connected foam line (1-1/2") that utilizes an eductor and 5 gallon pails of foam. Pallets of foam are stored in the ERT garage and the Storeroom. }

Outside-agency foam units:

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- U.S. Naval Air Station
- BCVFD

For more detailed information on foam and foam application refer to Attachment A, "Guidelines for the Proper Use of Firefighting Foam at Oak Point."

Dry Chemical Tactics

Dry Chemical works best when the fire is not too large and is somewhat contained.

Dry Chemical Fire Extinguishers work well for fires that involve flammable and combustible liquids. They may also be used on electrical or solid-material fires.

Dry Chemical should NOT be used on fires that involve Maleic Anhydride. The resulting chemical reaction produces excessive gas.

Oak Point uses Purple K dry chemical powder in 5-30 pound, hand-held fire extinguishers, which are located throughout the Plant. Oak Point has also stationed 150- and 300-pound units – mounted on wheels – in locations where larger fires are more likely to take place.

Drawbacks with the use of dry chemical:

- It provides only limited cooling of the fire.
- Flashbacks are possible.
- There may not be enough dry chemical on-site to fight a big fire.

Inert Gases & Solids Tactics

Inert Gases

If the fire is enclosed or semi-enclosed, inert gases such as nitrogen and carbon dioxide may be used. Inert gases extinguish the fire by diluting the oxygen content of the air.

For example: a fire inside of a tank. First close up the tank. Then place a nitrogen or carbon dioxide blanket on the fire.

DANGER: The fuel could re-ignite if air (oxygen) is allowed to reenter the tank before the fuel has cooled below its flash point or autoignition temperature.


Many tanks at Oak Point are equipped to introduce inert gases. Most use nitrogen. Some use carbon dioxide. This makes the extinguishment by inert gas an excellent option.

Inert Solids

Inert solids (e.g., sand) can be used for fire prevention and extinguishment for water reactive solids such as P_2S_5 .

PPE Tactics

PPE is required for employees when they are attacking a fire (e.g., applying foam or water directly to a fire for the purpose of extinguishment). This requirement does not apply when fighting fires with hand-held extinguishers.

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Full Fire Bunker Gear is required. This includes:

- Nomex hood
- Coat
- Pants
- Gloves
- Boots
- Helmet with face shield

When dealing with a fire, or the potential for one, SCBA's should be available and used if needed. This includes fire reconnaissance and initial firefighting. When applying foam to a fire, SCBA equipment should be used.

Tactics for Spill or Release Emergencies

Spills of liquids and releases of gases or vapors, if flammable or combustible, may lead to a fire or an explosion. Emergency responders must control spills or releases of flammable or combustible substances in order to keep the situation from getting worse.

Liquid Spills

Liquid spills may or may not form a visible cloud depending on some or all of the following characteristics:

Vapor Pressure	Vapor Density
Rate of Evaporation	Air Temperature
Relative Humidity	Wind Speed
Vapor Color	

To mitigate a liquid spill, do the following:


- Determine if a rescue is needed.
- Establish the Control Zone.
- Approach from up-wind.
- Remove or turn off ignition sources if the vapor is flammable or highly combustible.
- Zone the incident area (see Attachment B).
- Isolate and contain the spill.
- Stop the leak.
 - Close the valve ahead of the leak.
 - Use HAZMAT techniques to stop the leak.
 - Use water sprays or fog patterns to lessen and/or disperse the vapor clouds.

Some areas have source control boxes that can be isolated. Oil and aqueous wastes may be collected there and vacuum-trucked into the Ecology Area for disposal.

For more detailed information and reporting requirements of liquid spills, see Document ERM-6-10, "Release Procedures." For more information on Zoning, see Attachment B of this document.

Gas or Vapor Release

Gas or vapors may or may not form a visible cloud depending on some or all of the following characteristics:

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Vapor Pressure Vapor Density
Rate of Vaporization Air Temperature
Relative Humidity Wind Speed

To mitigate a gas or vapor release:

- Determine the necessary PPE (Personnel Protective Equipment).
- Establish the Control Zones.
- Approach from up-wind.
- Remove or turn off ignition sources if the material is flammable or highly combustible.
- Zone the incident (see Attachment B).
- Stop the leak.
 - Close the valve ahead of the leak.
 - Use water sprays or fog patterns to lessen and/or disperse the gas or vapor clouds.

Some vapor-air clouds can be flammable, toxic or both. Therefore, make a concerted effort to dissolve or disperse a vapor or gas cloud as quickly as possible.

DO NOT ALLOW ANYONE WHO IS NOT WEARING THE NECESSARY PPE TO ENTER THE INCIDENT AREA UNTIL THE AREA IS BELOW THE OSHA-PEL OR ACGIH-TLV, WHICHEVER IS LOWER.

Water fogs or sprays usually work well knocking down, dispersing, and dissolving vapor and gas clouds. Begin this technique as soon as possible after the release. Continue it until the leak has been stopped and the vapor or gas concentration in the air drops to an acceptable level (i.e., below the TLV/PEL and LEL of the material). Be sure to use the appropriate respiratory protection and protective clothing. Refer to PI-721 and PI-714 for more information.

For more detailed information and reporting requirements on air releases, see Document ERM-6.10 ("Release Procedures").
SOLID WASTES

Most solid wastes can be picked up and sent to the U&F Area for incineration. Contact the EH&S Department for disposal information.


Be sure to use the correct respiratory protection and protective clothing for the material being dealt with. Refer to PI-714, PI-721, and the "HAZWOPER Chemical Information Table" (Attachment A to Document ERM-3.0, "Emergency Preparedness").

Zoning (See Attachment B)

The restricted zone should be set up immediately. After initial isolation of the fire, and prior to the arrival of outside help, if needed, zone the incident into the three (3) zones described in Attachment B entitled "Zoning".

3.0 Definitions

BCVFD = Belle Chasse Volunteer Fire Department
EOC = Oak Point's Emergency Operations Center

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ERM	=	<u>The Oak Point Emergency Response Manual</u>
ERV	=	Oak Point's emergency response vehicle
GPM	=	Gallons per minute
IC	=	Incident Commander of the Oak Point ICS
ICS	=	Incident Command System
LEL	=	Lower Explosive Limit
N ₂	=	Nitrogen
O&M	=	Operations & Maintenance
P ₂ S ₅	=	Phosphorus Pentasulfide
PEL	=	Permissible Exposure Limit
PI	=	Oak Point's Plant Instructions
PPE	=	Personal protective equipment
psig	=	Pounds per square inch gauge
R { RRV	=	Oak Point's Rapid Response Vehicle }
SCBA	=	Self-contained breathing apparatus
TLV	=	Threshold Limit Value

4.0 References

None.


5.0 Records

Obsolete copies of this procedure shall be archived in the OPDMS in accordance with Corporate retention guidelines. Requests for review copies of documents in Archive Status shall be made in accordance with PI-113.

Record of Revisions and Reviews

Page	Revision	Date	Comments
1-18(1)	1.00	10/1993	Creation of the procedure.
1-18(1)	1.01	12/1993	Removed "(Future)" from footers and from behind 'OPDMS' on page 1.
1-19(8)	1.02	03/1997	Revision to Section 4.3.2.6 and addition of section 4.3.2.7 and added attachment "B" – Zoning.
1-19(7)	1.03	01/1999	Miscellaneous revisions.
1-14(5)	1.04	07/30/2004	Review of ERM. Updated signature page, added reference RRV and applied new format.

(#) = Number of attachment pages


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6.0 Attachments

- Attachment 1 - Guidelines for the Proper Use of Firefighting Foam at Oak Point.*
- Attachment 2 - Guidelines for Establishing Zones at Emergency Incidents.*

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Attachment 1

Guidelines for the Proper Use of Firefighting Foam at Oak Point

General Info:

Aqueous Film Forming Foam (AFFF) is the fire fighting foam selected for use at the Oak Point Plant. When applied, AFFF acts as a barrier to exclude air or oxygen and to develop an aqueous film on the fuel surface that can suppress the evolution of fuel vapors. AFFF also absorbs heat from the surface, cooling the surface temperature below the flash point. The AFFF that Oak Point purchases is also alcohol-resistant. The selection of this 'multi-purpose' foam permits its use on alcohol and hydrocarbon-type liquid fires. The foam can either be educted at 3% or 6%. Hydrocarbon or nonpolar solvent fires can be extinguished with either a 3% or 6% solution. Alcohol or polar solvent fires must be extinguished with a 6% solution. The foam-to-water proportioning at Oak Point shall be set to ensure a 6% solution for all fire types. The specific uses of this foam will be discussed in the following text.

There are three main supplies of foam readily available for use in an emergency situation. The first supply is the Oak Point Emergency Response Vehicle (ERV). ERV has the capacity to store 100 gallons of foam concentrate in an on-board tank. Two adjustable-rate eductors are located on ERV and both are controlled from the first compartment behind the driver's door. The ERT team member who brings ERV to the emergency site will ensure that the nozzles and eductors are set to discharge a 6% foam solution. The foam is applied using a 150-foot 1-1/2" hose with a Turbojet® nozzle. This nozzle is adjustable but can only control the foam pattern.

{ The second foam supply is RRV (Rapid Response Vehicle), which is located near the ERV Garage. RRV utilizes an eductor and 5 gallon pails of foam. Pallets of foam are stored in the ERT garage and the Storeroom. }

The third foam supply is the portable foam cart, which is kept at the southwest corner of 9th & 'G' streets. The portable foam cart can be brought to the emergency scene by any of the Plant's pick-up trucks. The foam cart is to be used in emergency situations where more than two foam lines are needed to suppress a fire or where a supply of foam is needed and ERV is not available (for example, ERV is out for repairs or responding to an off-site incident). The portable foam cart has the capacity to store 75 gallons of foam concentrate in a newly installed on-board tank. The eductors on the foam cart are fixed so that a 6% foam solution is discharged.


R { Additional foam, in five gallon buckets, is kept in the Storeroom and the ERV garage. The Storeroom maintains at least twenty buckets of foam at all times. This foam can be used to refill either ERV, RRV or the foam cart during and after an emergency response. The stock number for the foam is 65-00150. The foam storage tanks on ERV, the 5 gallon pallets of foam and the portable foam cart are kept full and are routinely checked. }

A table showing the duration of the foam supply is attached. This table estimates how long the foam supply will last at different hose line configurations and combinations of the various foam supplies.

Personal Protective Equipment (PPE) is required for employees who are to apply foam to a fire. The required PPE includes bunker gear (jacket and pants), boots, gloves, helmet (with face shield) and a Nomex® hood. Self-Contained Breathing Apparatus should also be used when applying foam.

Foam Fire Extinguishing Methods:

The application of foam during fire fighting is effective only on liquid pools or other horizontal liquid surfaces (such as in trenches, sumps, and tanks). The effectiveness of foam depends on applying the foam at a high enough rate and in sufficient quantity to completely cover the entire flame space in a very short period. Care must also be taken to avoid any other activity that may break the foam cover, such as a stream from a hose line being used for cooling because a break in the foam cover may allow reflash to occur. Foam is not effective on a pressure-fed fire since a moving stream of gas or oil cannot be covered with a blanket of foam.

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Foam is more effective on small and medium size tanks since the foam can be applied so that the entire surface is covered quickly. The tanks at Oak Point fall into the small and medium size tank category. The maximum tank diameter at Oak Point is seventy-five (75) feet. Therefore, foam is suitable for use at Oak Point on tank fires provided the roof has been lifted (roof separated from shell) to allow the placement of foam.

When a fuel is released, action must be taken as quickly as possible to isolate the source and prevent any additional release. If the fuel ignites and the fuel is confined, foam can be effective in extinguishing the fire. However, as long as any leak continues, constant replacement of the foam blanket will be required to prevent a reflash. (Using foam will reduce amount of water that must be applied, thus avoiding transport of spilled fuel and possibly fire into the wastewater systems.)


For tank fires at Oak Point which are accompanied by an internal explosion that partially or entirely lifts the roof, extinguishment can almost always be accomplished by covering the entire liquid service with foam. One important limitation to the application of foam on 'open top' tanks involves the potential for **boilover**. A hydrocarbon or nonpolar solvent fire in a fixed reservoir may, under certain rare conditions, boil over with considerable violence. This will cause the burning oil to spread on the ground and could possibly injure fire fighters close to the reservoir. The key elements for the formation of a boilover are: 1) the presence of a water layer at the bottom of the reservoir; and 2) a burning liquid which contains both a light fraction and heavy residues. Boilovers occur most frequently in reservoirs containing heavy oils such as crude oil or heavy bunker oil. Boilovers do not occur in reservoirs containing lighter petroleum products, such as OGA gasoline additives, aromatic solvents, alcohols, or other polar solvents. There is no potential for boilover in OLOA 219 since a water layer does not exist in any of the storage tanks.

A **boilover** occurs in the following manner: As lighter fractions near the liquid surface burn, superheated heavy residues which are left behind sink slowly. These residues form a heat wave as they move down towards the cooler oil/water underneath the surface. When this heat wave reaches the water layer, steam is generated. The volume of steam generated is thousands of times greater than the volume of water. This great volume of steam rises and pushes the product violently out of the reservoir.

At Oak Point, water layers are possible in the tanks that receive tetramer, solvent, and polybutene that are shipped via barges. A water layer has also been noticed in the OGA storage tanks in the terminal field. All of these tanks are monitored for the presence of a water layer and the water is removed through the water draw on the bottom of the tanks. Even though a water layer may be present, these raw materials/products do not possess the same characteristics as crude oil or heavy bunker oil and therefore do not present a boilover hazard.

Frothing occurs when water or foam is applied to the surface of a burning liquid; this actually aids in the extinguishment of the fire. The hot burning layer superheats the water or the water in the foam and produces steam. This generation of steam temporarily displaces the oxygen directly above the burning liquid. This leads to another concern to consider during a tank fire. The term **frothover** is used to describe an overflow of burning liquid much smaller than a boilover. Frothovers may result from the application of water or foam onto a burning surface which has burned long enough to have a hot layer. Frothovers occur more frequently if a tank is near full. The amount of discharge from a frothover is relatively small and it is normally not violent like a boilover.

During a tank fire (in which the roof has been lifted), foam should be applied at the earliest possible moment. Two concerns must be addressed prior to the application of foam. First, all ground fires must be extinguished prior to extinguishment of the burning tank. Without extinguishment, the ground fires may provide a source of re-ignition for the tank. Secondly, a check must be performed to evaluate if there is sufficient foam available. The Corporate Fire Protection Staff recommends having at least twenty minutes supply of foam on hand prior to the extinguishment of a fire. Twenty minutes should be enough time to put out a small or medium size tank fire or for outside agencies (such as the Naval Air Station or the Belle Chasse Volunteer Fire Department) to respond.


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Uncontrolled Document***Attachment 1 (Continued)***

The foam must be applied with a hose line consisting of a minimum of three employees. Two foam lines may be necessary to quickly cover the burning surface. Care should be taken to avoid frothovers, especially with tanks near capacity. To protect the employees applying the foam, a standby hose team shall be present with a charged hose line to aid the retreat of the foam team in the event of a mishap.

Foam must be applied so that the disruption of the burning surface is minimal. Applying foam aimed directly at the burning surface will either cause the foam to pick up the fuel and burn itself or will cause the fuel to splash out of the reservoir. The most common techniques used to apply foam include banking it off a vertical surface, bouncing it off a horizontal surface or lobbing (arching) the foam into the air before hitting the burning surface. All of the techniques mentioned reduce the effect of the impact of the foam on the burning surface.

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Attachment 2

Guidelines for Establishing Zones at Emergency Incidents

In all emergencies beyond the incipient stage, some method of **Zoning** is required to handle the emergency and control access of unauthorized personnel into areas where they may impede the progress of controlling the emergency. Also, these persons may be injured needlessly. The **Zones** also provide an organized escape route, a safe haven, a decontamination setup, if needed, and an isolated support zone. The three (3) **Zones** are.

- Restricted Zone (Hot Zone)
- Limited Access Zone (Warm Zone)
- Support Zone (Cold Zone)

Zone details are outlined below:

Restricted Zone (Hot, Red, or Exclusion Zone) - This Zone surrounds the hazard area. It is characterized by the following:

- There is actual or potential danger to life and/or health of a person in this zone.
- There is reason to approach with extreme caution wearing PPE necessary for protection.
- There will be an escape route from the hazard area through this zone to the Limited Access Zone.

Only persons with the necessary protection from the contaminating chemical or fire by-products may enter this zone.


Limited Access Zone (Warm, Yellow or Contaminated Reduction Zone) - This zone surrounds the Restricted Zone. It is characterized by the following:

- There is a safe haven.
- There is a decontamination area set-up, if needed.
- There is an exit from the decontamination set-up into the support zone

This zone provides a forward access point for the necessary personnel and equipment to provide direct support to the ERT personnel in the Restricted Zone. All other personnel should be kept out of this area.
Support Zone (Cold, or Green Zone) - This zone surrounds the Limited Access Zone. It is characterized by the following:

- It is a clean area without contamination by the chemical involved or the products produced by a fire.
- It will generally contain an entrance from the decontamination set-up
- It will generally contain a forward staging area
- It will contain the IC Command.
- It will generally contain areas for medical personnel and other persons deemed necessary by the IC for efficient functioning of the IC command.

All persons not essential to the emergency effort should be kept out of this area.

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Zoning can be critical for even small fires, releases or spills. Create the hot zone immediately and the other zones as soon as possible. Whenever possible, use instruments such as the Passport, the MicroTip, the Photovac 2020 or a Drager Pump and tube to assist you in the process. The Restricted Zone should always include any areas that are or could be dangerous to a person's life or health including the potential for explosion.

Conditions that must be taken into consideration when deciding how far each zone should extend are:

- Flammability/combustibility of the material and those materials involved in the emergency and those stored around the emergency area.
- Size of the container (tank)
- Damage to the container
- Liquid level left in the container
- Presence of oxidizers in the area
- Presence of incompatible chemicals in the area (MA and Caustic, for example)
- The weather
- Potential ignition sources in the area
- Industrial Hygiene measurements compared to the PEL or TLV or the material that is released or spilled. It must be remembered that PEL's and TLV's are generally Time Weighted Averages and the amount that will be directly hazardous to life and health will have to be estimated based on personnel experience. Always add a safety factor to your estimate and, if there is any doubt, be sure PPE is worn.

There is no way to predetermine zone distances. Zones must be determined on-site at the time of the emergency. They may not even remain the same throughout the emergency, but will change with the weather and the progression of the incident itself.

In general, the estimates given in the "North American Emergency Response Guidebook" can be helpful. This publication is available in the Safety Team's library and on ERV. One example is outlined below:

For small spills of a toxic chemical, containers the size of a 55 gallon drum or smaller and no fire, establish the following:

- A Restricted (Hot) Zone of 100 feet
- A Limited Access Zone or 250 feet
- A Support Zone as needed

Remember that all emergencies are different and must be judged using the following as a guideline:

- The conditions at the emergency as outlined above.
- The chemical's physical properties.

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ORIGINATED	REVIEWED	AUTHORIZED
SAFETY SPECIALIST	HEALTH & SAFETY SUPERVISOR	AMERICAS REGION MANAGER
S. J. STUNTZ	G. A. CREEKMORE	M. H. BURNSIDE

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Hard Copies, other than those listed in the Distribution List above, shall be considered uncontrolled copies and will not be updated.

OPDMS

All networked personal computers shall have access to the most current version of this Procedure in accordance with PI-111, "Control of Quality Assurance Related Documents and Procedures."



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1.0 Introduction/Scope

The goal of the decontamination process is to minimize the potential harm of hazardous chemicals to:

- People
- Environment
- Property

The decontamination process consists of one or both of the following tactics:

- Physically remove the contaminants.
- Chemically change the nature of the contaminants so that the contaminating substances are less harmful (e.g., neutralizing acids or bases).

The extent of the decon process depends on the details of each specific situation. This could consist of any number of factors and variables. Usually the most important consideration is the type of contaminant involved.

Information about the toxicity of various substances, required PPE, and decontamination procedures can be found in the reference documents listed in Section 4.0, "References."

For information about environmental and cleanup issues, contact one of the Environmental Engineers.

The procedures in this document apply to all emergency response personnel.

2.0 Procedures


2.1 Decontamination Leader

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The Incident Commander supervises the ERT Team { Coordinator } (as per ERM-6.1, Incident Commander), and the ERT-Team Leader will assign one of the members of the ERT Team to act as Decontamination Leader during an actual emergency. All members of the Emergency Response Team are trained in Decontamination Setup and operation.

The Decontamination Leader should do the following:

- Develop a decon plan. When formulating the decontamination plan, the Decon Leader should:
 1. Take into consideration the worst-case scenario of the situation overall.
 2. Adapt the decon plans to fit the specific conditions of the emergency. The following conditions must be considered:
 - Type of contaminant
 - The amount of contaminant
 - Level of protection required
 - Type of PPE (i.e., SCBA, full chemical suit, or Greylite)
- Establish a decon corridor (i.e., a path from the spill or release area -- the hot zone -- to the decon area).
- Establish an area where the decon procedures can take place. This area is commonly called the Warm Zone.

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- See that the necessary equipment and materials are available (e.g., buckets, stools, scrub brushes, water, and containment items).
- Establish a high level of safety awareness.
- Supervise the decon process.

2.2 The Decon Team

Team Composition

A Decon Team should have as many people as needed; depending on the circumstances of the incident, but it must always have a least two people. Team members should be chosen as follows:

- First choice: ERT Team members.
- Second choice: People with HAZWOPER Operations Level II or Level III training can be used on the Decon Team but only if supervised by a member of the ERT Team.

Purpose of Decon Team:

The Decon Team will be charged with the following duties:

- Remove hazardous material from contaminated people and PPE.
- Help people remove their PPE.
- Decontaminate and/or properly dispose of contaminated equipment. (Contact the EH&S Department for proper disposal.)
- Decontaminate and otherwise clean up the Decontamination Area

2.3 Decontamination Procedures, Equipment and Methods


Decontamination Procedures

There are critical decontamination procedures that should be ongoing during a HAZMAT incident. Procedures to decontaminate anything leaving the hot zone and contamination perimeter must be implemented to prevent or reduce the transfer of contaminants of:

- Personnel
- Protective equipment
- Monitoring equipment
- Clean-up equipment

Unless otherwise demonstrated, everything leaving the hot-zone should be considered contaminated. Emergency responders must understand the differences between emergency decon and full decon. **Emergency** decontamination is the physical process of immediately reducing contamination. Emergency decon only provides for gross decontamination, so there may still be the potential of secondary contamination and exposure to hazardous materials.

Full decontamination is the physical or chemical process of reducing and preventing the spread of contamination. Decontamination options may include rinsing equipment, personnel, etc. with large amounts of water and detergent/water solutions. This process is described in the

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"Methods" section of this document. Attachment "B" illustrates the minimum physical layout for personnel full decontamination for a relatively small, well-defined situation.

The acronym **I HOPE** is applied to help responders understand the important decontamination concepts:

I	Identify
H	Help or Hold
O	Operations
P	People and Equipment
E	Environmental Considerations

I – Identify

The hazard must be identified before action is taken to eliminate the risk of serious danger. Use MSDS's or other reference material to determine life hazards and characteristics of the material with which you are dealing.

H - Help or Hold

Determine if the risk and benefits are worth a quick "in and out" **help** or whether you should hold and use established procedures determine prior to the incident.

O – Operations

Operations include the actual plans and procedures of decontamination for both victims and rescuers. Support personnel who are inside the warm zone must be decontaminated also.

P – People and Equipment

Determine the appropriate number of people it will take to mitigate an incident. Use people to their maximum potential. For example, once the containment crew is in chemical protective clothing, send those assisting to the initial rinse pool to aid victims being rinsed. These same people should be prepared to change out bottles of the containment crew. In addition, be aware of the equipment required for an incident.

E – Equipment Considerations

Time of day, temperature, wind speed and direction, and other environmental considerations are key factors in any incident. For example if an incident occurs at 3:00 a.m. during a thunderstorm, it will be advantageous to transport the victims to a warm, controlled area where decontamination equipment and medical personnel can be stationed, such as the maintenance shop.

Equipment

Decon equipment is listed on Attachment 2 of this document, under decontamination stages one through six. The activities completed in each stage are listed as headings for each stage.


Methods

The flow chart in Attachment 2 of this document lists the stages of activities and the equipment needed to carry out routine decon procedures.

The stages of decontamination listed in Attachment 2 are also listed below, along with the methods needed to accomplish each decontamination stage.

Stage 1: Equipment Drop

Leave all equipment and tools that were used in the Hot Zone in this area. Do NOT carry anything into Stage 2.

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Stage 2: Boot Cover & Outer Glove Removal

Remove boot covers and outer gloves and drop them in a bucket of decontamination solution.

Stage 3: Wash & Rinse

R Leave PPE and SCBA on and scrub with a long-handled brush and decon solution. Rinse with water from the garden hose or portable shower. Collect the rinse water in a plastic pool, { unless predetermined that a Plant Safety Shower can be used. Then, contact the Ecology area to advise them of contaminants reaching the drainage system. }

Stage 4: Change & Return

If returning to the Hot Zone, first put on full SCBA air cylinders, new outer boot covers, and new outer gloves.

Stage 5: Equipment Removal

If NOT returning to the Hot Zone:

1. Take off the decontaminated PPE.
2. Change regular clothing if necessary.
3. Leave the Decon Area and go to the Cold Zone.

Stage 6: Medical

Anyone injured and/or showing symptoms of contamination should be decontaminated before being treated – unless that person's condition is serious enough to warrant immediate medical treatment (e.g., if a person has lost too much blood, stopped breathing, etc.). If the injured or contaminated person has NOT been decontaminated, medical personnel treating that person should wear appropriate protection.


2.4 Other Considerations and Guidelines

Standard Precautions

- Adopt the following priorities for the decon operations:
 1. People
 2. Environment
 3. Property
- Protect the Decon Team first. Do NOT start decontamination until the Decon Team is adequately protected. This means to don appropriate PPE.
- If possible, decontaminate patients before treating them
- Give decontamination procedures priority over modesty and weather exposure.

Handling of Contaminated Wash and Rinse Solutions

In most on- or off-site decon situations, the wash and rinse solutions should be contained. For on-site decon situations, any wash and rinse solutions not contained will generally end up in the storm-water drainage system. Contact EH&S personnel for proper disposal of wash and rinse solutions. Refer to Attachment 2 of this document for the Level A decon procedures flow chart for both on- and off-site decontamination.

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For specific information on Oak Point's chemicals refer to Attachment 1 of this document

3.0 Definitions

Cold Zone	=	Area free of contamination
Decon	=	Decontamination
EH&S	=	Environmental, Health, & Safety Department
ERM	=	<u>Oak Point Emergency Response Manual</u>
HazMat	=	Hazardous materials
HAZWOPER	=	Hazardous Waste Operations and Emergency Response (OSHA regulation 29 CFR 1910.120)
Hot Zone	=	Area of the spill or release
IC	=	Incident Commander of the ICS
ICS	=	The Oak Point Incident Command System
OSHA	=	Occupational Safety & Health Administration
PPE	=	Personal protective equipment
SCBA	=	Self-contained breathing apparatus
Warm Zone	=	Area where Decon activities take place

4.0 References


"Information Sheets – Hazardous Chemicals," Attachment C to ERM-6.6, Off-Site Emergencies

"Hazardous Materials 40-Hour Training Course Notebook," Foster Enterprises (The Safety Department keeps a copy in its library)

"Hazardous Material Emergency Response Notebook," TEEX, Texas A&M University (The Safety Department keeps a copy in its library)

5.0 Records

Obsolete copies of this procedure shall be archived in the OPDMS in accordance with Corporate retention guidelines. Requests for review copies of documents in Archive Status shall be made in accordance with PI-113.

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Record of Revisions and Reviews

Page	Revision	Date	Comments
1-10(1)	1.00	12/1993	Creation of this procedure
1-11(4)	1.01	01/1999	Revision to Section 4.3, Decontamination and Attachment A, Hazwoper Chemical Information Table
1-7(4)	1.02	07/30/2004	Review of ERM, update of names and signatures, application of new format.

(#) = Number of attachment pages

6.0 Attachments

- Attachment 1 - HAZWOPER Chemical Information Table
Attachment 2 - Level A Decontamination

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Attachment 1

Hazwoper Chemical Information Table


Chemical	NFPA			PPE	Decontamination Solution-See Below	Incompatibilities	Environmental Protection Concerns	Exposure Limits	
	H	F	R					TWA	STEL
Acetic Acid	3	2	1	B	C	Strong Caustics and Oxidizers	Neutralize acids spills with Caustic before attempting clean-up; Verify with pH probe	10 PPM	15 PPM
Acetic/Formic Acid	3	2	0	B	C	Strong Oxidizers/Caustics Conc. Sulfuric Acid	Neutralize acids spills with Caustic before attempting clean-up; Verify with pH probe	5 PPM	10 PPM
Acetic Anhydride	3	2	2	A	C	Water Alcohols, Amines Strong Caustics/Oxidizers	Neutralize washings with Soda Ash or Lime	C5 PPM	-
Acetone	2	3	0	B	C	Oxidizing Materials, Acids		750 PPM	1000 PPM
Acetonitrile	2	3	2	B	C	Strong Oxidizers		40 PPM	60 PPM
Alcohol 262	1	3	0	B	C	Caustics, Aldehydes, Amines, Oxidizers	Large quantities cause significant Oxygen depletion in aqueous systems	100 PPM	40 PPM
Alcohol 267	2	3	0	B	C	Oxidizing Agents	Large quantities cause significant Oxygen depletion in aqueous systems	50 PPM	-
Alcohol, Isobutyl	1	3	0	B	C	Oxidizing Agents		50 PPM	-
Alcohol, Methyl	1	3	0	B	C	Oxidizers, Reactive Metals		200 PPM	250 PPM
Alcohol, SecButyl	3	3	0	B	C	Caustics, Aldehydes, Amines, Oxidizers		100 PPM	-
Alpha Pinene	1	3	0	B	C			-	-
Ammonia	3	2	2	B/A	C	Boron Trifluoride		25 PPM	35 PPM 24 Mg/m ³ (>35PPM)-C
Ammon HT	3	1	0	B	C	Strong Caustics and Oxidizers		-	-
Boron Trifluoride	4	1	3	A	W	Ammonia Oxidizers		1 PPM	2.8Mg/M ³ (1.07PPM)
Butylene (CIS-Butene)	2	4	1	B	C	Strong Oxidizers		THC 400 PPM	
Carbon Dioxide	3	0	0	B	W			10,000 PPM	30,000 PPM
Caustic	3	0	1	A	D	Acids, Aldehydes	Neutralize Caustic with Acid spills before attempting to clean-up; Verify with pH probe	-	-
Chloroform	3	0	0	B	C	Strong Caustics		2 PPM	-
Cobratrac 45-1	2	3	0	B	C	Oxidizing Agents		-	-
DETA/RPA	3	1	0	A	C	Acids, Aldehydes	Avoid discharge to Stormwater System	1 PPM	-
Diphenylamine (DPA)	3	1	0	C	C	Oxidizing Agents		-	-

Decontamination Solutions: C = 5% Trisodium Phosphate Solution

D = 1 Pint Hydrochloric Acid in Ten Gallons Water Solution

W = Water Rinse

Note: PPE listed in this table is for worst case situations and may be downgraded by the I.C. for moderate or small spills, leaks or releases.



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Hazwoper Chemical Information Table


Chemical	NFPA				PPE	Decontamination Solution-See Below	Incompatibilities Oxidizing Agents	Environmental Protection Concerns	Exposure Limits	
	H	F	R	0					TWA	STEL
Dithiophosphoric Acids	3	2	0	0	B	C				
Ethylenediamine (EDA)	3	2	1	0	A	C	Acids, Aldehydes	Avoid discharge to Stormwater System	10 PPM	
Hydrogen Sulfide	3	4	0	0	B	W	Strong Oxidizers		10 PPM	15 PPM
Laccolene	1	3	0	0	B	C	Strong Oxidizers		400 PPM	
Maleic Anhydride	3	1	0	0	A	C	Strong Oxidizers/Caustics Amines (>150F)		.25 PPM	
Monomethylamine	3	4	0	0	A	C	Strong Oxidizers	Neutralize spills with Sodium Bisulfate, control vapors with water fog		
Naptha	2	4	0	0	B	C	Strong Oxidizers		10 PPM	15 PPM
OLOA 233A	3	1	0	0	A	C	Strong Bases/Oxidizers			
OLOA 262	3	1	0	0	C	C	Strong Acids, Strong Oxidizers	Contain liquid to further prevent contamination of soil, surface water and groundwater		
OLOA 262J	3	1	0	0	C	C	Strong Acids, Strong Oxidizers	Contain liquid to further prevent contamination of soil, surface water and groundwater		
OLOA 267	3	1	0	0	C	C	Strong Acids, Strong Oxidizers	Contain liquid to further prevent contamination of soil, surface water and groundwater		
OLOA 269	3	1	0	0	C	C	Strong Acids, Strong Oxidizers	Contain liquid to further prevent contamination of soil, surface water and groundwater		
OLOA 269Q	3	1	0	0	C	C	Strong Acids, Strong Oxidizers	Contain liquid to further prevent contamination of soil, surface water and groundwater		
OLOA 269R	3	1	0	0	C	C	Strong Acids, Strong Oxidizers	Contain liquid to further prevent contamination of soil, surface water and groundwater		
OLOA 269RJ	3	1	0	0	C	C	Strong Acids, Strong Oxidizers	Contain liquid to further prevent contamination of soil, surface water and groundwater		
OLOA 269RK	3	1	0	0	C	C	Strong Acids	Contain liquid to further prevent contamination of soil, surface water and groundwater		
OLOA 1572	3	1	0	0	C	C	Acids, Aldehydes	Avoid discharge to Stormwater System		
OLOA 2500T	3	1	0	0	B	D	Strong Acids, Strong Oxidizers			
OLOA 2500V	3	1	0	0	B	D	Strong Acids, Strong Oxidizers			
OLOA 2501C	3	1	0	0	B	D	Strong Acids, Strong Oxidizers			

W = Water Rinse

D = 1 Pint Hydrochloric Acid in Ten Gallons Water Solution

Decontamination Solutions: C = 5% Trisodium Phosphate Solution

Note: PPE listed in this table is for worst case situations and may be downgraded by the I.C. for moderate or small spills, leaks or releases.



ORONITE
Oak Point Plant

Oak Point
Emergency Response Manual
Decontamination

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Attachment 1 (Continued)
Hazwoper Chemical Information Table

Chemical	NFPA			PPE	Decontamination Solution-See Below	Incompatibilities Strong Oxidizing and Reducing Agents Elevated Temperatures and Strong Alkalies	Environmental Protection Concerns	Exposure Limits	
	H	F	R					TWA	STEL
OLOA 2501M	3	1	0	B	C	Strong Oxidizing and Reducing Agents		-	-
OLOA 2502S	1	1	1	B	C	Elevated Temperatures and Strong Alkalies	Avoid discharge to Stormwater System	-	-
OLOA 2504B	2	3	0	B	C			-	-
OLOA 2504D	3	1	0	B	C	Strong Acids, Strong Oxidizers		-	-
OLOA 2505Y	3	1	1	B		Strong Acids, Strong Oxidizers	Avoid discharge to Stormwater System	-	-
OLOA 2506C	3	1	0	B	C	Strong Acids, Strong Oxidizers		-	-
OLOA 4268D	3	1	0	B	C	Strong Acids, Strong Oxidizers		-	-
Phosphorous Pentasulfide	3	1	2	B		Water, Acids, Oxidizers		-	-
Pibsa Resin	3	1	0	B	C	Strong Bases, Strong Oxidizers		-	-
Phenol	4	2	0	A	C	Strong Oxidizers	Avoid discharge of any quantity to Stormwater System	5 PPM	-
Parafomaldehyde	2	2	1	C	C	Causatics, Amines, Acids		-	-
Sulfonic Acid	3	1	0	A	C	Strong Oxidizing Agents		1 PPM	-
Sulfur	3	1	0	B	C	Hydrocarbons, Strong Oxidizers		-	-
Sulfur Dioxide/ Trioxide	3	0	2	B/A	C			2 PPM	5 PPM 13Mg/M ³ (<35ppm)-C
Sulfuric Acid	3	0	0	A	C	Heated Alcohols, Oxidizing Agents	Waste Sulfuric Acid should be diluted with water and neutralized with an Alkali (Caustic)	-	-
TEPA	3	1	0	A	C	Acids, Aldehydes, Oxidizing Agents	Avoid discharges to Stormwater System	-	-
TETA	3	1	0	A	C	Acids, Aldehydes, Oxidizing Agents	Contain spill and cover with Sodium Bisulfate to neutralize	-	-
Toluene	3	2	0	B	C	Strong Oxidizing Agents		100 PPM	150 PPM
Xylene	2	3	0	B	C	Strong Oxidizing Agents		100 PPM	150 PPM


W = Water Rinse

D = 1 Pint Hydrochloric Acid in Ten Gallons Water Solution

C = 5% Trisodium Phosphate Solution

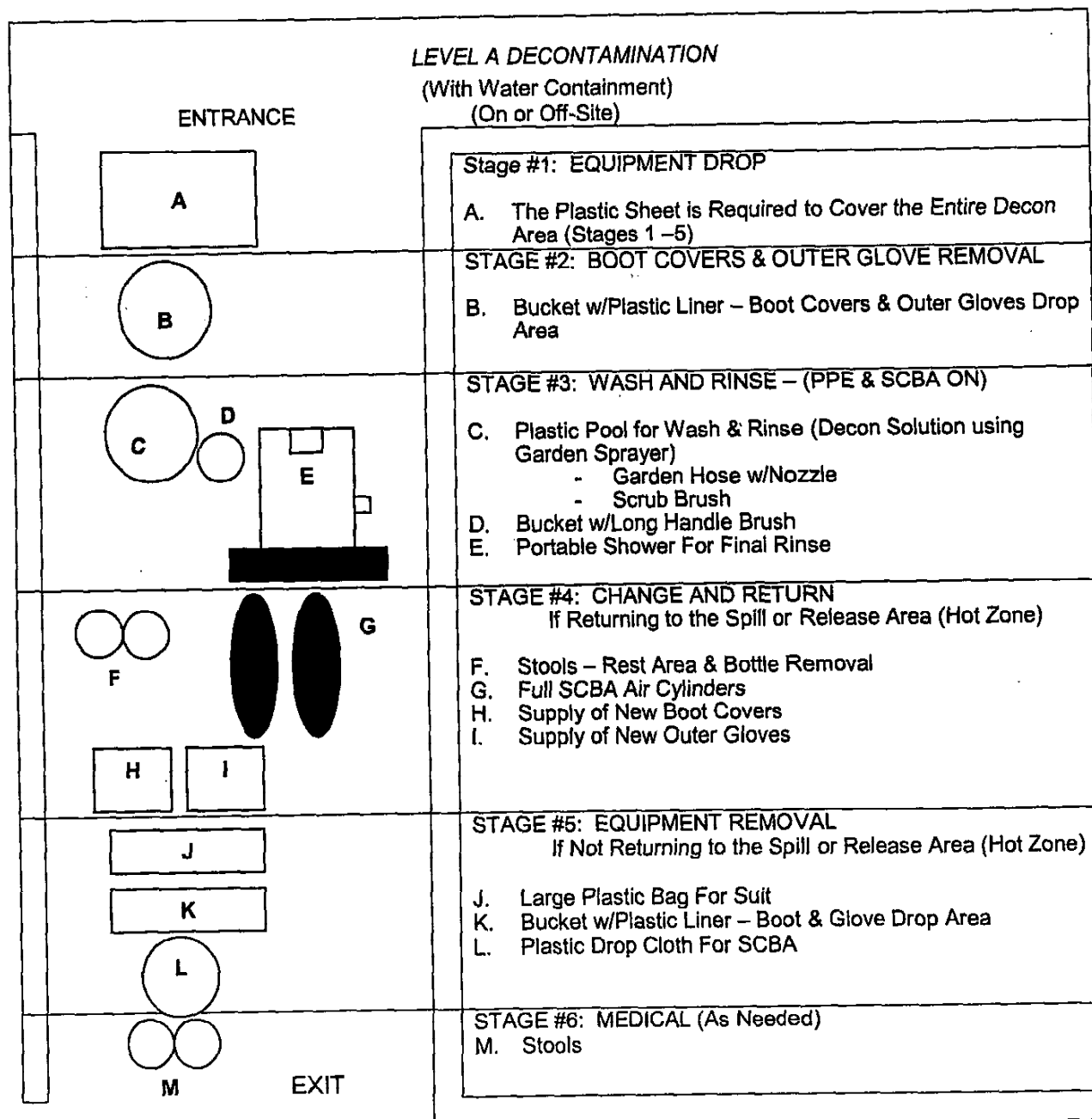
*** Brush off Suit and remove while standing in a 300 Gallon Bag

Note: PPE listed in this table is for worst case situations and may be downgraded by the I.C. for moderate or small spills, leaks or releases.

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Attachment 2

Oak Point Emergency Response Manual On-Site Injuries and Incidents

ERM-6.9
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ORIGINATED	REVIEWED	AUTHORIZED
SAFETY SPECIALIST	HEALTH & SAFETY SUPERVISOR	AMERICAS REGION MANAGER
S. J. STUNTZ	G. A. CREEKMORE	M. H. BURNSIDE

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OPDMS

All networked personal computers shall have access to the most current version of this Procedure in accordance with PI-111, "Control of Quality Assurance Related Documents and Procedures."




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1.0 Introduction/Scope

This instruction outlines the procedures to be followed for handling on-site injuries and work-related illnesses and for the investigation and reporting of injuries and work-related illnesses sustained by Company employees on the job and by contractors at work in the plant. It also outlines procedures to be followed for handling the investigation and reporting of incidents and near misses where no injuries were reported, such as fires, explosions, and chemical releases. The information from each investigation and report will be used to meet regulatory requirements and to determine what action must be taken to prevent similar types of illnesses, injuries, and incidents in the future.

2.0 Procedure

2.1 Reporting of Incidents


All accidents/incidents – whether they involve work-related illnesses and injuries or not – and all significant near misses shall be reported by the employee or the contractor to the responsible Chevron Oronite supervisor during the shift on which the incident occurs. Failure to report in a timely manner may result in disciplinary action. If the responsible supervisor is not available, the incident or significant near miss shall be reported to any available Chevron Oronite supervisor. Supervisors will handle reports of incidents as follows:

1. Report Handling: "Pending" Injury of Employee

If an employee injury does not require a visit to the doctor or other first-aid treatment, it will be labeled as a "Pending" or "Unclassified" injury. An "Unclassified" injury does not require any documentation (See Section 3.0, "Definitions"). For a "Pending" injury the supervisor must fill out the front portion of form GO-42 (Employee Report of Occupational Injury or Illness - see Attachment 4), keep the original, and route a copy through the supervisor to the Safety Department. The form is to be marked "Pending" at the top of the form. The Safety Department will maintain a file of "Pending" injuries for at least the previous twelve months. This file is for Management review to determine trends and to provide documentation in case later treatment is needed or a claim of harm is made. An injury that falls into this category but later develops complications such as a doctor visit or lost work day will be changed to a "First-Aid" or an "OSHA Recordable" injury and handled as noted in Section 2.1 (2). See Section 3.0 for complete definitions of injury types. Classification of the injury as "First Aid" or "OSHA Recordable" is handled by the Safety Department using Company and Bureau of Labor Statistics (BLS) OSHA guidelines.

2. Report Handling: First-Aid, OSHA Recordable, or Lost-Time Injury of Employee

All employee injuries sustained on the job that require in-plant first-aid by a First Responder or other in-plant or off-site medical treatment by medical personnel shall be reported on a GO-42. This form is to be completed in a preliminary form (front side of form) by the injured employee's immediate supervisor, who will deliver copies of it to the offices of line supervision, the Safety Department, and the Americas Regional Manager within 24 hours following the injury. GO-42 blank forms are available from Steno or you can copy the blank form in the Quick Reference section. All final reports (both sides) shall be completed as soon as possible, but within five (5) working days after the injury as required by OSHA. The immediate supervisor is responsible for coordinating the investigation and distribution of the completed form.

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3. Report Handling: Contractor Injuries

Chevron Oronite's commitment to safety in the work place includes all contractor activities in the plant. However, our legal obligations are different for contractor injuries and we have no regulatory reporting requirements. Oak Point procedures for contractor injuries are:

- a. The contract person or the contractor's supervisor must immediately report all incidents including "Pending", "First Aid" or "OSHA Recordable" injuries to the responsible Chevron Oronite Supervisor. All significant "Near Miss" incidents shall be reported also.
- b. The responsible Chevron Oronite supervisor will conduct the injury investigation as described in Section 2.4. If a Highlighter or e-mail notification is warranted, it must be prepared as described in Section 2.5 by the responsible Chevron Oronite supervisor.
- c. A primary Chevron concern is our potential liability when a contractor is injured. For this reason we have an independent investigation -- arranged by the Safety Department -- for significant Contractor injuries. These are done during regular working hours for less than severe injuries. For severe contractor injuries, see Section 2.9, Item 7.

4. Report Handling: Work-Related Illnesses

All work-related illnesses are classified as OSHA Recordable. Use the GO-42 form to report the illness.

A work-related illness is generally characterized by abnormal conditions or disorders that develop over time, caused by prolonged exposure to chemicals.

On the other hand, an injury is generally characterized by a single instantaneous event in the work environment, such as a cut, burn, or fracture.

5. Report Handling: Other Incidents

Other incidents include fires, explosions, or chemical releases. Reports used for these incidents are outlined below:


- GO-106 Fires and Explosions.
- GO-140 Oil Spills.
- ERM-6.10, Air Releases. See document ERM 6.10 in the Oak Point Emergency Response Manual (ERM).

2.2 Accident and Illness Files

An accident file on each employee and contractor will be kept by the Safety Department. Significant near misses, "Pending" injuries, First-Aid injuries, and OSHA Recordable injuries will be included in the file records. All may be considered for addressing accident performance problems (see Section 2.6).

2.3 Injury Newsline and Safety Scoreboard

Immediately following all reported injuries (other than "Unclassified"), the employee's supervisor must see that the safety scoreboard is updated and a message put on Safety Newsline 6300. See Attachment 4 of this document for the proper procedure for using the Safety Scoreboards at Gates 1 and 3. See Attachment 1 of this document for instructions on use of Safety Newsline 6300.

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The Safety Newsline is the mechanism designed to inform internal or external personnel of changes to the safety scoreboard. Therefore, it is important that the responsible supervisor put a message on the Safety Newsline anytime the yellow light is turned on. The safety team will provide guidance on other light status changes.

Updating of the scoreboard and the injury message must be completed before the injured employee's immediate supervisor completes work for the shift in which the injury occurred.

2.4 On-Site Investigation (Chevron Oronite and Contract Employees) - "Level 2"

General Incident Investigation Guidelines

We are classifying all incidents into "Level 1" and "Level 2". Incident investigations will be handled differently for each Level. "Level 1" incident investigation procedures are outlined in PI-728, Incident Investigations, while "Level 2" procedures will be handled using the informal method as outlined below. Please refer to Section 3.0 for the definition of Incident and the Criteria for Levels 1 and 2 incidents.

Illness/Injury Investigation Procedure - "Level 2"

The injured employee's immediate supervisor is responsible for conducting an on-site investigation as soon as possible following an injury (i.e., within 48 hours). Significant near misses (injury or non-injury related), First Aid injuries and OSHA Recordable injuries also need to be investigated. Unclassified and Pending injuries do not require investigation. Work-related illness investigations will be dealt with separately on a case-by-case basis.

The on-site investigation will consist of the following main five steps:

- Assembling the investigation team.
- Recreating the incident.
- Brainstorming the incident.
- Developing corrective action items.
- Communicating the results.

Chevron Oronite Employee Incident Investigation - "Level 2"


The supervisor shall prepare a written summary of the investigation on form GO-42 (Attachment 4 of this document for Chevron Oronite employees). In addition, remember to do the following:

- Record names of the members of the investigating team.
- Discuss lessons learned during the investigation and record as appropriate.
- Attach additional pages to GO-42 if necessary.

This investigation procedure also applies to incidents and near misses where no injuries were reported (e.g., fires, explosions, or chemical releases). In these cases, Forms 1710-A & B (Attachment 5 of this document) shall be completed. These forms will not take the place of other required forms such as the GO-106 for fires and explosions or the GO-140 for oil spills.

If there is reasonable cause to suspect drug or alcohol involvement related to any injury, incident, or near miss, the responsible supervisor shall consult his immediate supervisor to decide if further action is justified.

The supervisor of the injured employee, or the person in charge of the non-injury incident, who is conducting the investigation shall be aided by the following people:

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- Injured employee, when possible (if injury is involved)
- Appropriate witnesses
- Members of Management including the 2nd Level Supervisor, the Department Manager, and others as warranted
- Safety Department representative
- Safety committee representative from the area, when possible
- Employee knowledgeable of the specific task or operation, as needed
- Union Representative (Invite mainly for injuries or significant near miss injuries involving Chevron Oronite employees)
- Human Resources Representative
- Other outside specialists (fire, medical, industrial hygiene) as appropriate

If it is not possible to assemble the above personnel within the 48-hour time limit, then – until the complete investigation team can be assembled – the following people will complete an initial or preliminary investigation:

- First-line Supervisor of the injured employee or person in charge of the non-injury incident, when possible
- Appropriate witnesses
- Injured employee, when possible (if injury is involved)

Contractor Incident Investigation - "Level 2"

The contractor's supervisor shall prepare a written summary of the formal investigation on Form OP-1711 (Attachment 6 of this document) for his/her employees. This form will provide factual data only of the incident and will not include corrective actions or lessons learned.

However, the Safety Department with assistance from the investigation team members will do the following after the formal investigation has been completed:

- Record the names of the members of the investigation team
- Determine the lessons learned, corrective action items and document separately for highlighter purposes


The formal investigation team for contractor incidents should include the following:

- Injured contractor, when possible
- Appropriate witnesses
- Human Resource Representative
- Safety Department Representative
- Operating Representative of the area
- Contractor Supervisor
- Chevron Oronite Contract Representative

2.5 Safety Highlighter

Most investigations of actual incidents and significant near misses will generate useful information about prevention. Therefore, after completing the investigation, the responsible supervisor shall produce a Safety Highlighter (Attachment 2 of this document), which will broadcast lessons learned from the incident and provide a written action plan to prevent recurrence of the incident.

If the need for a safety highlighter is questionable, the responsible supervisor will discuss the benefit of the highlighter with the Safety Department.

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Work-Related Illness highlighters will be dealt with separately on a case-by-case basis.

The main components of the highlighter will include:

- Date of the incident
- Date of the investigation
- Description or nature of the incident
- Cause of the incident
- Recommendations from the incident (corrective action items)
- Resolutions or lessons learned
- Person responsible for corrective action follow-up

NOTE: The Safety Department will handle the auditing and record-keeping function for Safety Highlighters. However, it is the responsibility of the person named in the Safety Highlighter to ensure completion of corrective action items and to report their completed status to the Safety Department. (See Attachment 2 of this document.)

For contractor related safety highlighters, the Safety Department will determine if a specific detailed highlighter is warranted (as outlined above) or if a generic non-specific highlighter is appropriate. This type of highlighter would broadcast a general safety message but not get into the specifics of an individual event.

Since timeliness is important, Safety Highlighters must be completed and published no more than seven days after the incident. It is the responsible supervisor's function to prepare an accurate and concise description of the incident and the lessons learned. However, no Safety Highlighter will be distributed without endorsement by the Safety Department.

2.6 Injury Repeaters


Completion of the GO-42 requires a check of the employee's record as an injury repeater. A repeater is an individual who has a pattern of injuries that are attributable to the employee's own actions. Normally, significant near misses and "Pending" injuries will not be included when checking for a pattern of accidents. However, they may be included if the number becomes excessive.

2.7 Supervisor's Consultation with Employee

As soon as the GO-42 is completed and the employee returns to work, the immediate supervisor shall thoroughly review the completed GO-42 with the employee. The supervisor should emphasize those things that the employee should have been reasonably expected to do that may have prevented the injury. The employee and the supervisor should come to a mutual agreement as to the cause and what should be done to prevent another incident in the future. The fact that Management requires working safely as a condition of employment shall be made clear to the employee and that this consultation is an effort to help prevent injuries to the employee and others in the Plant.

Work-related illness consultations will be dealt with separately on a case-by-case basis.

The employee's safety record shall be reviewed at this time. If the employee is an injury repeater, this shall also be discussed. In this case, the employee shall be counseled that unsafe work habits must be corrected and that having another injury could result in disciplinary action. Upon completion of this consultation, the supervisor shall note on the back of the GO-42 that it was reviewed with the injured employee, the date, and any pertinent comments the injured

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employee made concerning the injury. The employee may receive a copy of the completed GO-42.

2.8 Injury and Illness Reports

All injuries, significant near misses, "Pending" injuries, and work-related illnesses shall be reported by the person in whose area of responsibility the injury or illness occurred. This shall be done at the first management meeting following the injury or illness.

2.9 Employee On-Site Injury and Illness Procedures

Unclassified injuries (minor injuries) that require self-administered first aid (e.g. applying a band aid to a minor cut) are excluded from these instructions. **For more serious injuries that may require off-site medical services, follow these steps:**

1. Arrange for Transportation (Any Injury or Illness)

For severe illnesses or injuries, the First Responder, supervisor or Plant Nurse will always arrange for an ambulance to transport the injured employee(s) to a local hospital. The Lab can be utilized to dial 911 and arrange for the ambulance. Call the Lab by radio or by dialing 4444. For less than severe injuries where off-site medical services are still needed, the Supervisor, a Supervisor delegate or the Plant Nurse may be used to transport the injured.

2. Call Plant Nurse/First Responders (Any injury or illness)

During normal working hours (7:00 a.m. to 4:30 p.m.), notify the Plant Nurse by phone or radio before allowing an injured or ill employee to leave the Plant.

Oak Point First Responders are available 24 hours a day by radio. They have been trained to administer advanced first aid treatment for most medical emergencies. In the event a safety shower was used to flush a chemical burn requiring removal of clothing, the First Responders will have access to temporary clothing.


As soon as possible after the off-site transportation has arrived (e.g., the Plaquemines Parish paramedics) and the medical service location determined, the responsible First-Line Supervisor must call the Plant Nurse. When not available, call Dr. Swift. Give the doctor/nurse your best description of the injury and the place where the initial treatment will occur during regular office hours.

For 24-hour per day service, contact the Plant Nurse or Dr. Swift.

The responsible Supervisor should call Dr. Swift's beeper directly at 664-9352 (Office: 889-7125). Dr. Swift will return your call within about 5 to 15 minutes because he always carries a beeper (24 hours/day and 365 days/year). Repeat this procedure if you don't get a return call.

After a treatment facility for the injured person is selected, the Nurse/Physician will call the appropriate hospital or medical facility and discuss patient treatment with the treating physician depending on conditions. We obtain three services through this procedure:

- A doctor for us to call who is familiar with the injured person's treatment from the beginning to give us status information.
- Where options for appropriate medical treatment exist, our occupational physician will assist in directing treatment so that we will avoid an unnecessary OSHA Recordable for

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the injury. An example would be to select over-the-counter medicine instead of prescription medicine when the two are similar or equivalent since use of prescription medicine typically requires OSHA Recordable status.

- If follow-up treatment is needed, the occupational physician will continue to provide medical treatment oversight.

3. Determine Where to Send Injured Person (Any Injury or Illness)

Severe work-related injuries or illnesses


- When the off-site transportation arrives, the paramedics take over treatment of the injured person. Typically, the ambulance paramedics will usually take the person to the closest emergency room which is Meadowcrest (391-5454). Another nearby emergency room option is: West Jefferson Hospital Emergency Room (349-1533).
- Oak Point prefers to use Meadowcrest because it is closer and provides the Procomp program. This Program identifies Chevron Oronite, provides expedited service, and requires notification to the occupational physician. Mention "Procomp" to Meadowcrest personnel. Note that drug and alcohol screens are only to be done on the injured employee at the request of the supervisor.
- If the injured person is coherent, he or she may choose where to go for medical treatment which may utilize another New Orleans area medical facility.

Less severe work-related injuries or illnesses

- We are required by law to provide prompt medical attention whenever it is warranted; use your best judgment with input from the employee and the Plant Nurse or First Responder if they are involved. If the employee refuses medical attention when you believe it is needed, you can insist on it. If you need help, call your supervisor or the Manager-on-Call.
- We have arrangements with Meadowcrest, however, if the employee prefers to go to another medical service, this is acceptable as long as it meets the prompt requirement.
- We can require the employee to see a Company doctor for evaluation but not for treatment. If the employee chooses not to go to Meadowcrest, we will require the employee to see our Company doctor as soon as possible also. Ensure you inform the employee of this requirement and make the arrangements. The Plant Nurse or the Safety Team can assist.
- We are entitled to medical records from evaluation and treatment of all occupational injuries and illnesses. Have the employee sign the GO-153 if they will. If they refuse to sign, we can obtain the information in other ways.

4. Accompany Employee to Hospital (Any injury or illness)

The injured employee will still need either a ride home from the hospital, or back to work, or someone to assist in contacting a family member. These functions remain the responsibility of the First-Line Supervisor as they have been in the past and will usually require the Supervisor to accompany the injured employee to the hospital. Upon arrival, identify the injured employee and provide all the necessary information pertaining to the illness or injury. Send along a MSDS for chemical illnesses or injuries. Also, you should remain with the ill or injured employee(s) until they are released from the hospital. Then, arrange for their safe

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transportation back to work or their residence, as appropriate. In addition, the First-Line Supervisor will need to inform line supervision or the Manager-on-Call for any injury that requires off-site medical treatment.

5. Handle Severe Injury Reporting

A severe injury is one that is fatal, potentially fatal, or may result in disability, disfigurement, or impairment of bodily function. In addition, any injury that is likely to attract media or public attention shall be considered a severe injury.

An accident which is fatal to one or more employees or which results in hospitalization of three or more employees must be reported to the office of the Area Director of the Occupational Safety and Health Administration located in Baton Rouge, LA. The Management must make the report within eight (8) hours of the accident.

In addition, if an incident results in the death of an employee or the in-patient hospitalization of three or more employees within 30 days of the incident, it must be reported within eight (8) hours after learning of it.

The report may be made by calling the Baton Rouge office at (504) 389-0474 from 7:30 a.m. to 4:00 p.m. M thru F or off hours toll free to 1-800-321-6742.

Each report shall relate the following information: Establishment name, location of incident, time of the incident, number of fatalities or hospitalized employees, contact person, phone number and a brief description of the incident. Further information or reports concerning the accident will be furnished in writing or otherwise, as requested by the Area Director.

During off hours, the First-Line Supervisor must always call line supervision and the Department Manager-on-Call for an on-site, severe injury to a Company or contract person. An additional call to the Safety Department is required for a severe injury to a contractor so that our Human Resource Specialist may be notified promptly. The Manager-on-Call will handle other appropriate notifications within the Company and to the family of the injured person.


For a fatality, the First-Line Supervisor or the Manager-on-Call must also notify the Plaquemines Parish Sheriff's Department at 911 or 525-6825. They will arrange Coroner services.

6. Recognize Follow-up Treatment Procedures (Any injury or illness)

When follow-up medical treatment is needed or desired, the injured person always has the option to see his or her own physician. This means one doctor of their choice with treatment at our cost. The Company also has the option to ask our employee to go to our authorized physician (Company doctor) or to jointly select a physician with the employee. In most cases, we send the injured person to our authorized physician at our expense. Normally, this step will be handled by Human Resources and the Safety Department in consultation with Dr. Swift or his associate. This may require periodic visits to our Company doctor to monitor recovery progress. Human Resources and the Safety Department will handle this for the plant and will keep the employee's supervisors informed. See item 4 above also for more information.

7. Handle Follow-up Communications with the Plant Nurse and Injured Employee

For injuries with off-site medical treatment, it is important to keep responsibilities and lines of communication clearly defined. This means that during off hours, we have instructed

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Dr. Swift or the Plant Nurse to make one prompt follow-up phone call to the Supervisor who called or to the Supervisor's relief after the initial off-site medical treatment. Further follow-up communications with Dr. Swift will typically be handled by the Safety Department. Any necessary communications with the employee remains the responsibility of the first-line supervisor.

8. Return to Work

The sick or injured person(s) must obtain clearance from the Company Doctor before returning to work if hospitalized for one (1) day or more or if absent from work for five (5) working days or more. This can be arranged through the Plant Nurse. A GO-153 form will also need to be filled out. See "Quick Reference Summary" titled "Employee Injuries" for more information on GO-153's.

Should the employee express a desire to return to work prior to receiving a medical release for full duty "without restrictions", refer to Oak Point's Restricted Duty Policy.

2.10 Emergency Equipment Cabinets

Oak Point stores and maintains first aid supplies at various locations around the Plant. These supplies are housed in cabinets that have been placed in the more remote places of the facility (below).

Level I


First aid kits have been placed at the following locations:

- Maintenance/Purchasing Department
 - A small kit hangs on the wall by the Woman's Restroom in the Purchasing building.
 - A large kit has been placed in the First Aid Room (next to the Maintenance Lunch Room).
- Utilities
 - A large kit hangs on the Locker Room wall of the Utilities Control Room.
- Centralized Control Room
 - A large kit hangs on the wall near the Shift Supervisor's office.
- Blending & Shipping
 - A kit hangs on the wall near the Shift Supervisor's office.
- Lab
 - A large kit hangs on the east wall, on the control side of the Lab.
- Accounting
 - A small kit is located on wall across from the woman's restroom.
- Receptionist
 - A small kit is located at the receptionist's desk.

Level II

First Responders kits have been placed at the following locations:

- Manufacturing Area Shift Supervisor's office
- Utilities & Filters Shift Supervisor's office

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- Blending & Shipping Shift Supervisor's office
- Maintenance Shop Foreman's office
- Oak Point's Emergency Response Vehicle (ERV)

3.0 Definitions

Incident

An incident is defined as any situation or set of circumstances that resulted in, or could have resulted in, an undesirable health, safety, or environmental consequence. Include events such as injuries, fires, explosions, chemical releases, or other unplanned operations or maintenance upsets.

Incident Classification

An incident must meet the following criteria outlined below to be considered a "Level 1" incident. A "Level 1" incident requires a formal investigation as detailed in PI-728, Incident Investigations. This will include a formal "Why Tree" root cause analysis, unless the Management Team waives this requirement based on the details surrounding an incident.

"Level 2" incident investigations shall be handled using the informal investigation procedures outlined under Section 4.4 and include any incidents not identified as "Level 1". Examples of "Level 2" incidents could include, near misses, equipment failures (initial) non-reportable releases or small fires. See Attachment "8" entitled "Incident Investigation Requirements Table" for additional details.

"Level 1" Incident Criteria

The following are examples of "Level 1" incidents (See Attachment "8" entitled "Incident Investigation Requirements Table" for additional details.):


- First-Aid Injury;
- All OSHA Recordable illness or injuries;
- Fatalities to employee or contractor;
- Injury requiring hospital admittance to employee or contractor / multiple hospitalizations;
- Major Fire/explosions, reportable releases or spills;
- Any incident per request from the Department Managers or Americas Regional Manager (e.g., events where a pattern is evident);
- Any "Level 2" incident that the investigating team feels should be moved to "Level 1";
- Mis-pumpings, re-blends or off-test batches
- Product losses.

Unclassified Injury

An unclassified injury is any minor injury that does not meet the criteria for the other three injury classifications. An unclassified injury may also be the outcome of a pending injury when significant complications do not develop. Examples of unclassified injuries include:

- A minor cut that is treated with antiseptic (once) and covered with a Band-Aid.
- A skinned knuckle with no treatment.
- A pinched finger or other body part which is bruised slightly and needs no treatment.
- A small first degree burn; this means reddening only of the skin and is less than a total of 10 square inches of burned surface.
- All insect bites unless medical treatment is required for pain, swelling, or allergic reactions.

No documentation is required for these injuries.

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Pending Injury

A pending injury is a temporary classification used at Oak Point to refer to an injury for which the extent or *significance of the injury is unclear* at the time that it occurs. A pending classification is applied to an "invisible injury" such as a back pain or a gas/vapor inhalation that at the time amounts to only minor discomfort, but may develop more serious complications several hours to many days after the incident occurred. When such an "invisible injury" occurs, the immediate Supervisor shall complete a standard GO-42 accident report form (front side only) to record the incident, keep the original, and route a copy through the Supervisor to the Safety Department. As soon as possible, the Supervisor, in consultation with the employee, shall re-classify the pending injury as either unclassified or shall refer the injury and the GO-42 to the Safety Department for first aid or OSHA Recordable determination. The time table to accomplish this re-classification is dependent on the individual circumstances; a rule of thumb guideline is to re-classify the injury within 30 days of the incident.

First Aid Injury

A first aid injury is one that usually requires the use of first aid supplies and warrants documentation on a GO-42 for accident trends and prevention efforts. Treatment may be self-administered, or it may be provided by the First Responders, by the Plant Nurse, or by a doctor. In cases where professional medical care is provided, treatment may include repetitive cleaning and bandaging of an injury and administering a one-time dose of prescription medicine at the time of the injury. Such treatment and any follow-up visits **for the purpose of observation only** is considered first aid even when it is provided by the Plant Nurse or a physician, whether on-site or off-site. Use of a First Responder, the Plant Nurse or a physician will usually warrant a first aid injury classification due to the service and supplies they provide.

OSHA Recordable Injury

An OSHA Recordable Injury is an occupational injury that results in:

- A case without a lost workday that:
 - Requires administration of prescription medicine (except as a single dose)
 - Requires transfer to another job
 - Requires medical treatment beyond first aid treatment
 - Involves loss of consciousness
 - Involves restriction of work or motion (i.e. restricted work or light duty)
- A lost workday case, other than a fatality, that results in a failure to report to work.
- A fatality case, regardless of the time between the injury and death, or the length of the illness.


Significant Near Miss

A significant near miss is an event that could have resulted in an OSHA Recordable Injury, Recordable illness or a Reportable non-injury related incident (fire, release, etc.) given the right conditions.

This will be a judgment call by the Supervisor. In questionable circumstances, contact the Safety Department.

4.0 References

PI-728, Incident Investigations

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5.0 Records

Forms GO-42 and Forms 1710-A & B shall be kept on file in the Safety Department for a minimum of five years.

Obsolete copies of this procedure shall be archived in the OPDMS in accordance with Corporate retention guidelines. Requests for review copies of documents in Archive Status shall be made in accordance with PI-113.


Record of Revisions and Reviews

Page	Revision	Date	Comments
1-13(6)	1.00	2/14/92	Creation of the procedure.
1-16(7)	1.01	10/27/92	Revision to the procedure.
1-18(7)	2.00	10/93	Incorporated into the ERM.
1-18(7)	2.01	12/93	Misc. revisions.
1-18(6)	2.02	5/94	Misc. revisions.
1-19(12)	2.03	12/94	Revisions to replace Attachment A.
1-21(12)	2.04	7/95	Minor revisions to Sections 4.4 and 4.5.
1-21(12)	2.05	8/95	Minor revisions to Section 4.9.
1-21(12)	2.06	12/95	Revised Section 4.9 to include miscellaneous telephone numbers and delete reference to Dr. Casten.
1-21(21)	2.07	3/97	Revisions to Section 4.9 to include drug and alcohol screening information on injured employees, suggested medical services for injured employees and replacement of Attachments "B" and "C".
1-21(23)	2.08	10/97	Definitions added to Section 3.0. Title and subsequent titles added to Section 4.4. Addition of Attachment I: Formal "Level 1" Incident Investigation Procedure. Revised Attachment A: Operating Instructions for Newsline phone.
1-21(30)	2.09	1/99	Addition of Attachment "J" Why Tree Incident Investigation Matrix.
1-14(13)	3.0	07/30/04	Revision to add reference to PI-728, Incident Investigations, eliminate Attachment 3, "Directions to the Tulane Centers for Occupational Health Clinics", deletion of Attachment "4", Safety Scoreboard Light Changes, deletion of Attachment 8, Incident Investigation Requirements Table, renumbering of remaining attachments; update of signatures and incorporation of new format.

(#) = Number of attachment pages

6.0 Attachments

- Attachment 1 – Operating Instructions for Safety / Accident Newsline
- Attachment 2 – Safety Highlighter Outline – OP-1742A and OP-1742B
- Attachment 3 – Safety Scoreboard Procedure
- Attachment 4 – GO-42, Employer's Report of Occupational Injury or Illness
- Attachment 5 – OP- 1710, Oak Point Investigation Report for Non-Injury Related Incident or Near Miss
- Attachment 6 – OP-1711, Contractor's Report of Occupational Injury or Illness
- Attachment 7 – Formal "Level I" Incident Investigation Procedure

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Attachment 1

Operating Instructions for the Safety / Accident Newsline

The immediate Supervisor will place a voice message on the Safety / Accident Newsline reporting all pertinent information as outlined on the Message Format (see below).

The following format should be used in preparing your message for the Safety / Accident Newsline:

WHO	-	(Classification of Individual)
WHEN	-	(Day - Date - Time)
WHERE	-	(Area - Unit - Location)
WHAT	-	(Nature of Injury)
HOW	-	(Accident Details)
ENDING	-	(Your Name / Title and Time and Date)

The Safety / Accident Newsline can be accessed from any phone in the plant or even from outside the plant for message updates by calling ext. 6442 or 391-6442. To place a message on the Newsline from inside the plant, follow the instructions below:

- From any phone in the plant, dial **ext. 6442**. A recording will state "Prompt Maintenance, Voice Service ID".
- Enter the Voice Service ID "101" followed by the "#" symbol. (The number 101 is the Safety Newsline identification).
- You will now be prompted to enter the password for the respective service followed by the # symbol. Press "6300" and then the "#" symbol.
- You are now in the Prompt Maintenance menu. You will need to press number "5" to begin recording your message. When you have completed the message, press the "#" symbol.
- You can replay your message by pressing number "2". If you are not satisfied with the message, you can begin recording again by pressing "5" to begin recording. You will need to press the "#" symbol when you stop recording your message.
- When you are satisfied with your message, hang up the phone.

You may also place a message on the Newsline phone from outside the plant by dialing 391-6442 and following the above instructions.

The accident message will remain on the Newsline until another accident is taped on the newsline. To listen to the messages on the Safety / Accident Newsline call 6300.